The Outward FDI Strategies of Chinese MNEs: an empirical study of the Role of Business Group Affiliation and State Ownership Types

SHI, XINWEI

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Abstract

Chinese (C) Multinational Enterprises (MNEs) have been emerging as important competitors on the global scene. This doctoral thesis aims to investigate the role of business group affiliation and state ownership types on CMNEs' specific foreign direct investment (FDI) strategies. The thesis is broken down into five chapters. Chapter one provides a broad literature review on Emerging-market (E) MNEs and outlines mainstream International Business (IB) theoretical approaches to understanding EMNEs with specific reference to CMNEs. The important features of CMNEs' outward FDI strategies via cross-border mergers and acquisitions (M&As) are highlighted. The second chapter conceptually and empirically explores whether business group affiliation influences CMNEs' strategic asset seeking (SAS) FDI by type and property. It is argued that Chinese business group-affiliated firms have a greater likelihood of seeking patents, which have non-location-bounded (NLB) properties (i.e. can be exploited back in their domestic market, China), rather than trademarks, which have location bounded (LB) properties. Chapter three focuses on the impacts of state ownership types (i.e. incorporating central-government, provincial-government, municipal- or county-government and private ownership) on CMNEs' technology and brand-seeking FDI. My findings reveal that Chinese privately owned enterprises (POEs) are more likely to seek both advanced technologies and foreign brands. In comparison, CMNEs owned by higher-levels of government have a lower likelihood of seeking both technologies and brands, but they tend to acquire target firms that involved in natural resources. In Chapter four it is demonstrated firstly, that Chinese POEs are less likely to undertake international product diversification. Those affiliated to a business group, however, have a greater probability of doing so; and secondly that CMNEs owned by higher government affiliation levels tend to seek more unrelated international acquisitions. From Chapters two to four, this thesis progressively contributes to providing a specific picture of how home country effects in China determine MNEs' specific FDI strategies using firm-level data. Chapter five summarises the key findings and contributions of the thesis.

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To my parents and my wife

Executive Summary

The thesis has five chapters. Chapter one provides a broad literature review on Emerging-market Multinational enterprises (EMNEs) and outlines mainstream International Business (IB) theoretical approaches to understanding EMNEs with specific reference to Chinese (C) MNEs. The important features of CMNEs' outward Foreign Direct Investment (FDI) strategies are highlighted, including influence of home country effects on strategic asset seeking (SAS) orientation and international product diversification strategy. The home country effects refer to business group affiliation and state ownership types.

The second chapter conceptually and empirically explores whether business group affiliation, one important identifying characteristic of CMNEs, influences CMNEs' SAS FDI. I mainly use data from two different sources, including the Thomson One Banker (TOB) and the Orbis Database. Orbis provides data on the target firms' patents and trademark volume, which I use as proxies for the strategic assets sought by CMNEs. Unlike previous research, which uses mostly location choice modelling using national level proxies (i.e. number of patents granted nationally), I use firm-level data (i.e. what do CMNEs actually acquire). Further, I disaggregate strategic assets by type (i.e. patents and trademarks), which provides for further insights into EMNE theory.

Using *probit and negative binomial* models, I find that Chinese business group affiliated firms have a greater likelihood of seeking patents, which have non-location-bounded (NLB) properties (i.e. can be exploited back in their *domestic* market, China), rather than trademarks, which have location bounded (LB) properties (and are therefore less easy to exploit domestically). There are no empirical quantitative studies that clearly distinguish between the different types of strategic assets that are targeted by EMNEs. My findings are partially supported by the rationality of 'New Internalization Theory' (developed by Verbeke and Rugman (1992)), which stresses the properties of location-boundedness in strategic assets.

Additionally, business group affiliation plays a significant role in CMNEs' SAS FDI strategy. What emerges from these findings is the importance of the home country effects as a diver of outward FDI strategies, supporting ideas put forward in the 'springboard' perspective and more importantly those stressing the asymmetries found between DMNEs and EMNEs with regards to access to emerging markets as in the bundling model of Hennart (2012) and the asymmetric liabilities of foreignness argument of Petersen and Seiferts (2015).

In Chapter three I go on to focus on the impact of state ownership types (i.e. incorporating central-level, provincial-level, city-level and municipal-level government) on CMNEs' specific technology-seeking and brand-seeking FDI via cross-border mergers and acquisitions (CBM&As). In addition, I add one more comparative study of whether CMNEs owned by higher-level governments tend to acquire target firms that have natural resources as opposed to strategic assets (i.e. technologies and brands). I utilize a similar data set and methodologies, testing whether different state ownership types influence CMNEs' technology-, brand-, or natural resources-seeking FDI strategy. My findings reveal that Chinese privately owned enterprises (POEs) are more likely to seek both advanced technologies and foreign brands. In comparison, CMNEs owned by higher-level governments have lower likelihood of seeking both technologies and brands, but they tend to acquire target firms that are involved in natural resources. Hence, higher-level government owned firms are more likely to seek natural resource rather than strategic assets such as advanced technologies and brands.

A lot of current studies show that state ownership positively facilitates CMNEs' outward FDI. However, my findings suggest that state ownership may be not a significant factor influencing CMNEs' SAS FDI strategy, one possible reason being that the Chinese central government started to promote the national strategy of indigenous innovation in 2006, and the Gross domestic spending on R&D (i.e. % of

GDP) increased from 1.369% in 2006 to 2.067% in 2015 (OECD, 2017). Therefore, my findings extend the institution-based view identifying that CMNEs owned by higher-level governments largely tend to seek for natural resource endowments other than technology-based and brand-based assets via CBM&As.

In the fourth chapter, I explore a slightly different though related question to EMNE international business strategy. Anecdotally, CMNEs are seen to undertake unrelated international diversification. This is to say, they often acquire foreign businesses in unrelated industries as in Fosun Group's recent acquisition of Club Med as Fosun has no background in the tourist/leisure/travel industry in China. In particular, the critical question is: does business group affiliation and/or state ownership types influence CMNEs' international product diversification strategies via CBM&As?

Given *diversified* business groups are quite common in the Chinese domestic market, it is possible the tendency towards domestic diversification may also influence their international M&A strategies. I measure the degree of international product diversification through matching both target firms and Chinese acquirers' four-digit SIC codes. By using *ordered probit* models, I find that private firms are less likely to undertake unrelated international acquisitions. Those affiliated to a business group, however, have a greater probability of doing so; secondly CMNEs owned by higher-level governments undertake more international product diversification (i.e. a higher level of unrelated acquisitions); and thirdly CMNEs' degree of domestic diversification determines their degree of international product diversification in a positive and significant way. These findings contribute to the understanding of the effects of business group affiliation and state ownership types on CMNEs' specific international product diversification strategies, a topic hitherto not researched in the IB literature on EMNEs (though arguably one of their most important characteristics). This chapter, building on the previous two, is directly relevant to the home country effects on CMNEs' outward FDI strategies.

From chapter two to chapter four, this thesis may progressively contribute to providing us with a specific picture of how the home country effects determine CMNEs' specific FDI strategies.

Chapter five summarises the key findings and contributions of my research, highlighting the importance of understanding the business group affiliation and state ownership types which determine CMNEs' specific outward FDI strategies. Specifically, business group affiliation plays a significant role in CMNEs' SAS FDI activities to catch up with DMNEs and enhance their competitive positions in both domestic and international markets; different levels of Chinese governments are leading CMNEs to rapidly expand abroad in order to reach governments' strategic objectives.

Contents

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List of Abbreviations

Chinese Multinational Enterprises--CMNEs
Chinese Outward Foreign Direct Investment-----------------------------------Chinese FDI
Cross-border mergers and acquisitions--CBM&As
Complementary local resource--CLR
Emerging Market---EM
Foreign Direct Investment--FDI
Gross Domestic Product---GDP
Institution-based view--IBV
Liabilities of foreignness--LOF
Liabilities of outsidership--LOO
Location-bounded--LB
Ministry of Commerce--MOFCOM
Multinational Enterprises--MNEs
Non-location-bounded---NLB
Organisation for Economic Co-operation and Development----------------------OECD
Outward FDI--OFDI
Privately-owned enterprises---POEs
Research and Development---R&D
Ren Ming Bi--RMB
Resource-based view---RBV
Resource-dependence theory--RDT
State-Owned Assets Supervision and Administration Commission---------------SASAC
Standard Industrial Classification--SIC
State ownership enterprises---SOEs
Strategic Asset Seeking--SAS
Thomson One Banker---TOB
United Nations Conference on Trade and Development-------------------------UNCTAD

United States---US

United States Dollar---USD

Declaration

The content of this doctoral thesis is based on the research work completed at Durham University Business School, UK. No material contained in this thesis has previously been submitted for a degree in this or any other universities.

Statement of Copyright

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Chapter 1 Introduction

Research on foreign direct investment (FDI) provides us with a barometer for observing multinational enterprises' (MNEs') internationalization activities. For instance, Zekos (2005) argues that MNEs' FDI reveals an increasing share of the global economic activity. Traditional FDI outflows represent multinational enterprises[1]' (MNEs') investment from their home countries to overseas. In 2008, the OECD proposed a Benchmark definition of FDI that may account for the main attributes of MNEs:

> "*Direct investment is a category of cross-border investment made by a resident in one economy (the direct investor) with the objective of establishing a lasting interest in an enterprise (the direct investment enterprise) that is resident in an economy other than that of the direct investor …The "lasting interest" is evidenced when the direct investor owns at least 10% of the voting power of the direct investment enterprise.*" (OECD, 2008)

Over the past two decades, the world economy has witnessed a new and unprecedented wave of outward (O) FDI from emerging economies. According to UNCTAD (2017), FDI outflows from developing economies increased to $383.43 billion in 2016 from $13.11 billion in 1990. This represents a 30-fold increase, and their share rose from 5.38% to 26.40%. Emerging-country (E) MNEs are playing an increasing role in the world economy. In particular, the FDI outflows from China in 2016 occupied 47.75% of developing economy FDI outflows and 17.54% of developed economy FDI outflows (compared with 5.60% and 0.55% respectively in 1990), reaching $183.10 billion (UNCTAD, 2017). 105 Chinese (C) MNEs were ranked on the Fortune Global 500 list in 2017, which are all originally established on the Chinese mainland (Fortune, 2017). CMNEs can be regarded as one largest representative group of EMNEs.

[1] MNE in this research follows Rugman and Verbeke's (2001:238) definition as 'a firm with value-added activities in at least two countries.'

Ramamurti (2012:41) has challenged us to ask the question: "*What is really different about emerging market multinationals?*" EMNEs are defined as "*firms from emerging markets that have value-added activities outside their country of origin*" Cuervo-Cazurra, Newbury, and Park (2016:2). Relevant EMNE-specific FDI theories (e.g. Mathews' (2006) LLL framework and Luo and Tung's (2007) Springboard Perspective) suggest EMNEs' need to seek strategic resources so as to maintain or even establish their international competitive positions. Previous scholars have identified four firm-level determinants of MNEs' FDI, including market seeking FDI, resource seeking FDI, efficiency seeking FDI, and strategic asset seeking (SAS) FDI (Dunning, 1993, 2000). According to many, EMNEs actively follow SAS FDI strategies (Deng, 2009; Luo and Tung, 2007; Mathews, 2006; Rui and Yip, 2008), differing from developed-market (D) MNEs that tend to exploit their advantages including ownership advantage, internalization advantage and location advantages based on the popular 'eclectic framework' by Dunning (1977). Despite these differences, Gaffney, Kedia, and Clampit (2013) assert that the individual EMNE has its own different incentives to invest abroad, leading to heterogeneity in FDI or internationalization strategies. Specifically, Deng (2004:10) states that CMNEs' FDI are largely driven by five main motivations, namely, "*resources, technology, markets, diversification, and strategic assets.*" In short, CMNEs may internationalize to pursue all or any one of them at any one time.

Given the liabilities of foreignness, the possession of ownership advantages for firms is a required initial condition (Zaheer, 1995). However, the firm-specific advantages (FSAs) of EMNEs are unlikely to be the same as those of DMNEs, the former "*possess some unique and sustainable resources, capabilities or favoured access to markets which, if they chose to engage in asset augmenting foreign direct investment, they might expect to protect or augment*" (Dunning, 2006:139). Ramamurti (2012) argues that due to the distinctive home market conditions in emerging markets, EMNEs may have differing ownership advantages. There are FSAs and country-specific advantages (CSAs) that EMNEs can exploit when undertaking OFDI (Ramamurti, 2009; Rugman, 2010). Also, Hennart (2012) suggests that CSAs can facilitate EMNEs' foreign acquisition deals for their asset augmentation purposes. In terms of a firm's heterogeneity, however, limited research has addressed the extent to which home country effects determine each emerging-country firm's resources or capacities to achieve the special FSAs and CSAs that allow them to pursue specific FDI strategies. Buckley, Munjal, Enderwick, and Forsans (2016:987) note that "*the extant literature does not provide sufficient understanding of how the EMNE internationalises to augment its assets if it does not have sufficient pre-existing competitive advantages.*"

China's OFDI is widely discussed, due to its great increase (Child and Rodrigues, 2005; Morck, Yeung and Zhao, 2008; Sutherland and Anderson, 2015; Yang and Deng, 2017). As Buckley et al. (2007:50) state, "*China is a particularly good test case for the general theory of FDI as it presents many special conditions that are rarely encountered in a single country.*" Therefore, this study mainly focuses on CMNEs as the unit of analysis. The main purpose of this first chapter is to provide a specific literature review on CMNEs and outline mainstream IB theoretical approaches to understanding EMNEs with specific reference to CMNEs.

In the spirit of better understanding the rise of CMNEs, identifying which specific home country effects that contribute to CMNEs' development is of vital importance. Thus, to what extent do traditional firm theories help to meet this requisite?

In the context of emerging economies, business groups are believed to possess relative competencies and resources to address institutional voids compared with stand-alone firms in the context of emerging economies (Amsden and Hikino, 1994; Guillen, 2000; Khanna and Palepu, 1997). Yiu (2011) argues that Chinese business groups even possess multinational advantages to maintain competitive positions in overseas markets.

Existing research by Buckley et al. (2007), Huang and Chi (2014), Wang, Hong, and Kafouros, and Wright (2012) observe that Chinese privately owned enterprises (POEs) and state-owned enterprises (SOEs) largely receive differing treatment such as access to financial support in the domestic institutional environment. Furthermore, Wang et al. (2012) distinguish two types of government involvement including government affiliation level and state ownership. The former construct reflects the fact that governments want to engage in EMNEs' internationalization by establishing relationships with companies (Wank, 1995). In the Chinese context, government affiliation levels refer to central-government level, provincial-government level, and municipal- or county-government level. The second construct means the government is one of the shareholders of the firm (Wang et al. 2012). Notably, the two concepts are sometimes not correlated. A private firm may be affiliated with a higher government level, while the state-owned firm may be affiliated with a lower government level. To deal with this issue, this study will employ the term 'state ownership types' by dividing Chinese firms into four levels according to the ultimate owner or the largest shareholder, which are central-government owned, provincial-government owned, municipal- and county-government owned, and private ownership.

As a consequence, I focus on these two main factors of home country effects, including business group affiliation and state ownership types. Building on extant literature, I found that no empirical research has addressed whether these two factors affect CMNEs' specific SAS FDI strategies by types and properties and international product diversification strategy. Accordingly, first of all, I want to highlight the importance of the business group affiliation and study its influence on CMNEs' specific SAS FDI by types. Given the context of government involvement in China, the second study is mainly designed to explore state ownership types on CMNEs' specific FDI strategies, including technology, brand and natural resource seeking strategies. In the third study, I intend to study CMNEs' international product diversification strategy, exploring the influences of both business group affiliation and state ownership types. In the end, this thesis can contribute to providing a general picture of how home country effects in China determine MNEs' specific FDI strategies.

To concentrate on home country effects, therefore, I follow prior studies (e.g. Gaur, Kumar, and Singh, 2014; Wang et al. 2012) by integrating the resource-based view (RBV) and institution-based view (IBV), and explore the extent to which business group affiliation and state ownership types affect CMNEs' specific FDI strategies.

The rest of this chapter is structured as follows. In section one, I consider the unique features of the Chinese economy and in turn the features of the CMNEs that motivate me to undertake this research. Section two sets out the research questions and relevant objectives made prior to a general literature review. Section three, drawing from extant International Business (IB) theories, provides a specific literature view on CMNEs' FDI strategies, and identifies theoretical underpinnings to address the research questions above. Section four discusses past methodologies on my research topics. In the last section, I lay out the research agenda to further highlight relevant research topics in this thesis.

1.1 Research motivation

In October 2000, the Chinese central government formally announced the 'Go Global' national strategy and integrated it as a critical part of China's long-term and innovation-leaded national development plan (Deng, 2007). The central government initiated a series of relevant regulations for improving Chinese firms' international competitive positions. Table 1.2.1 clearly displays the increasing number of Chinese mainland-based MNEs which are ranked on the Fortune Global 500 list (from 2 in 1996 to 105 in 2017).

Table 1.2.1 The number of Chinese firms on the Fortune Global 500 list 1

Year	Total Chinese firms	Total, Mainland of China	State-owned firms, Mainland of China	Privately-owned, Mainland of China
1996	2	2	2	0
1997	3	3	3	0
1998	6	3	3	0
1999	8	5	5	0
2000	11	9	9	0
2001	12	11	11	0
2002	13	11	11	0
2003	12	11	11	0
2004	16	14	14	0
2005	18	15	15	0
2006	23	19	19	0
2007	30	22	22	0
2008	35	26	26	0
2009	43	35	34	1
2010	46	43	40	3
2011	69	59	56	3
2012	79	71	67	4
2013	95	87	81	6
2014	100	93	87	6
2015	106	95	90	5
2016	110	100	88	12
2017	115	105	86	19

Source: Fortune (2017)

China also overtook Japan again and became the second largest economy in terms of FDI outflows in 2015 (seen in Figure 1.2.2).

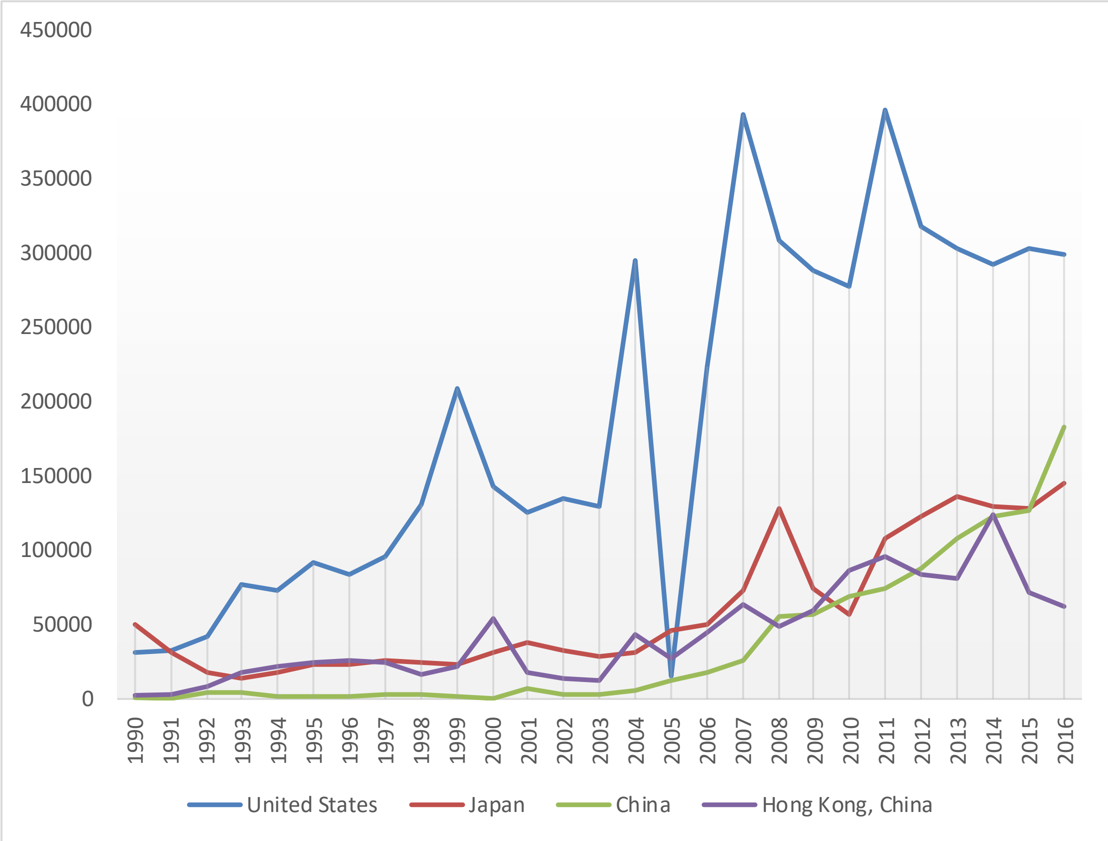


Figure 1.2.2 the comparison in FDI outflows between developed countries and China (millions of dollars) (UNCTAD, 2017) 1

As for 'BRICS' countries (referred to Brazil, Russia, India, China and South Africa), China is playing a leading role in emerging economies' FDI outflows, reaching 47.75% (Figure 1.2.3).

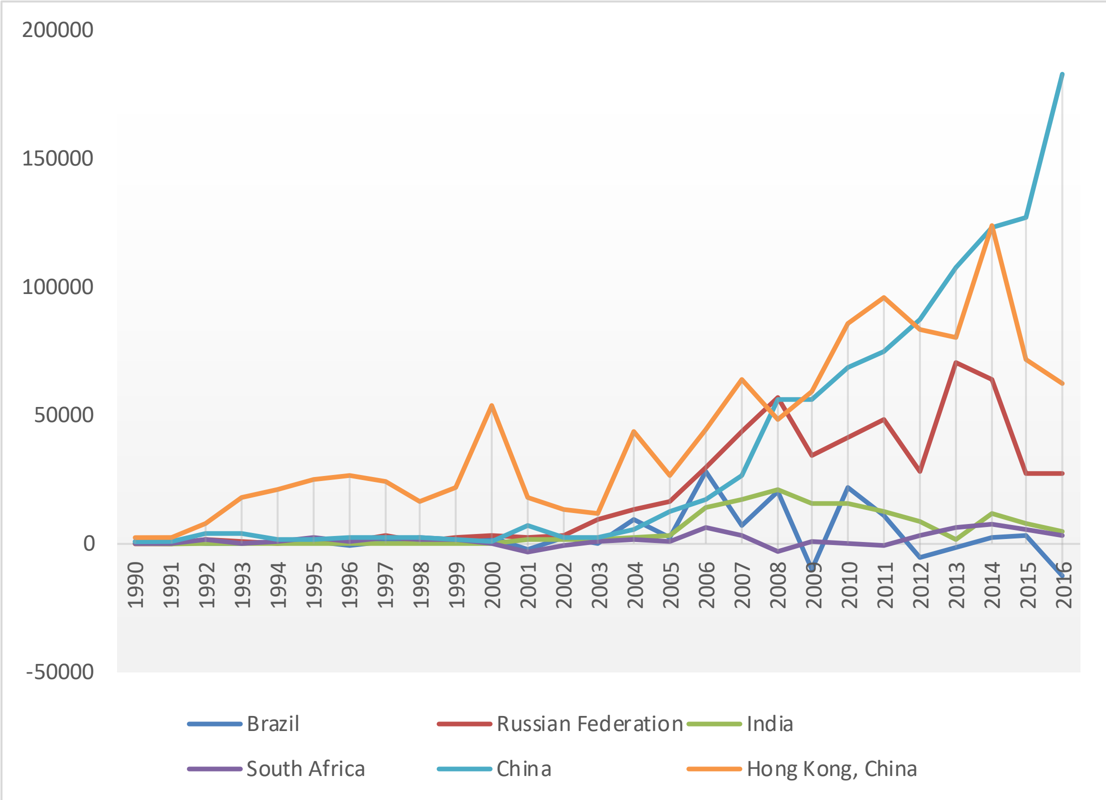


Figure 1.2.3 The comparison in FDI outflows between BRICs (millions of dollars) (UNCTAD, 2017) 2

Zhu (2015) claims that China was pursuing export-oriented growth and is transitioning to a new development model based on consumption and outward investment. In September 2013, President Xi Jinping proposed to build the "*Silk Road Economic Belt*" when he visited Kazakhstan; and in October 2013 he proposed the initiative of the "*21st Century Maritime Silk Road*" in Indonesia (Tian, 2015). The One Belt One Road Initiative (OBOR) is a national developmental strategy comprising the Silk Road Economic Belt and the 21st-century Maritime Silk Road. Moreover, Chinese President Xi Jinping announced the establishment of a new China-led multilateral development bank, the Asian Infrastructure Investment Bank (AIIB) in October, 2013 (Weiss, 2017). The AIIB will operate to serve the OBOR strategy (Zhu, 2015). Zheng[2] (2017) asserts that China's OBOR plan represents the next phase of globalization. As discussed above, one country's OFDI activities can be largely illustrated by its' MNEs' internationalization activities. Accordingly, if we correctly understand which specific

[2] Zheng Bijian is the former permanent Vice-President of the Central Party School (Zheng, 2017).

factors determine CMNEs' FDI strategies, in the future we can better assess the performance of China's national initiatives (e.g. OBOR plan) and understand the growing global role in terms of both economics and politics.

It is these issues, as well as gaps in existing research on CMNEs' OFDI, which have largely driven me to develop this research.

First of all, I observe that the role of Chinese business groups in China's economic development process. Business groups, are defined as a '*collection of firms bound together in some formal and informal ways*' (Granovetter, 1995:95). This organizational form, however, is pervasive in many emerging economies (Amsden and Hikino, 1994; Hikino and Amsden, 1994; Khanna and Palepu, 2000a). China's largest business groups are referred to as the 'national team' (Nolan, 2001; Sutherland, 2009). This includes a group of around 100 or so super large enterprise groups. At lower levels, such as at the provincial level, teams of groups also exist, as lower level policy-makers emulate the lead of the centre. Therefore, state policy has encouraged the formation of business groups in China.

These groups initially emerged in the era of China's market-oriented reform; in the mid-1980s, the Chinese government believed that business groups could solve a number of difficulties the Chinese economy was facing. For example, they might facilitate the introduction of new technology and then enhance international competitiveness (He, Mao, Rui and Zha, 2013). Chinese business groups also contribute a lot to China's OFDI (Sutherland, 2009; Yiu, 2011). Thus, Chinese business groups have increasingly captured researchers' attention in IB and management literature (Keister, 2000; Lu and Ma, 2008; Sutherland, 2009; Yiu, Bruton and Lu, 2005; Yiu, 2011). Notwithstanding, we know little about whether business group affiliation contributes to CMNEs' specific FDI strategies.

Secondly, from another perspective, the Fortune Global 500 (Figure 1.2.1) also shows that Chinese state-owned enterprises (SOEs) occupy a dominant share in the total Chinese mainland-based MNEs and they are playing a significant and important role in economic development. Rugman and Li (2007) contended that CMNEs' current international achievement is mainly attributed to country-specific resources that they have privileged access including natural resources, government support, and lower cost investment. In other words, the increasing emergence of Chinese SOEs on the Fortune Global 500 largely benefits from their privileged access to domestic critical resources.

According to UNCTAD (2017), a new database on state-owned MNEs shows their increasing influential role in the global economy. Specifically, 41 of the top 100 EMNEs are state-owned, and China is the largest home economy of state-owned MNEs. In terms of firms on the Fortune Global 500 list, there are 86 Chinese SOEs and 105 CMNEs in total (Fortune, 2017). Given more government interventions, the predictability of relevant policies for investors would be further declined. The recent IB literature has highlighted the critical role that governments are playing on CMNEs' foreign expansion via cross-border mergers and acquisitions (CBM&As) (Luo, Xue, and Han, 2010; Rui and Yip, 2008). However, there are few studies that investigate the effects of different state ownership types on specific corporate strategies (i.e. strategic asset seeking, international diversification etc.) by CMNEs.

The Chinese central government had strictly inhibited OFDI so as to conserve foreign exchange untill the mid-1990s (Peng, 2012), and it began to largely support OFDI in the late 1990s (Luo, Xue and Han, 2010). In the early 2000s, a great range of government policy tools were used to facilitate OFDI, including '*low-interest financing, favorable exchange rates, reduced taxation, and subsidized insurance…*' (Peng, 2012:98). In terms of institutional transitions[3], Lin (2016: 689) comments "*no country in the human history has ever grown so fast for so long as China did in the past three decades*". Despite a relatively inefficient home market mechanism, overall Chinese

[3] Institutional transitions is defined as 'fundamental and comprehensive changes introduced to the formal and informal rules of the game that affect organizations as players' (Peng, 2003:275).

SOEs have capacities to enhance their competitiveness in the international market, and their foreign expansion strategy is less influenced by domestic institutional development (Wu and Chen, 2014). As a result, SOEs should be regarded as another main research sample for studying CMNEs' FDI strategies.

To sum up, the study of EMNEs has generated significant academic interest and generated the '*Goldilocks debate*' regarding the need to analyze their distinctiveness in relation to theory (Cuervo-Cazurra, 2012). The debate has three perspectives: (i) EMNEs behave differently and there is a need to have new theories and models to analyse their behaviour; (ii) EMNEs are not a new species and existing theories can adequately explain their behavior; and (iii) the analysis of EMNEs does not require new theories but some modification or extension of existing theories and models (Cuervo-Cazurra, 2012). I believe the study of CMNEs can contribute to addressing the '*Goldilocks debate*', which is another main motivational factor for the development of this research.

1.2 Research questions

Dunning (2000:164-165) has identified four general determinants of firms' OFDI, including '*market seeking, or demand oriented FDI*'; 'resource seeking, or *supply oriented FDI*', '*rationalized or efficiency seeking FDI*'; and '*strategic asset seeking FDI*' (Dunning, 2000:164-165).

A substantial body of literature has suggested that EMNEs as 'late-comers' are actively involved in SAS FDI in developed markets to augment deficiencies in their own FSAs (Boisot and Meyer, 2008; Child and Rodrigues, 2005; Cui, Meyer, and Hu, 2014; Li, Li and Shapiro, 2012; Luo and Tung, 2007). This asset-augmentation strategy argues that EMNEs are pushed to achieve the competitive advantages they lack to compete with foreign entrants in their home country (Chari, 2013) and local firms in host countries (Buckley, Munjal, Enderwick, and Forsans, 2016). Specifically, CMNEs undertake aggressive CBM&As for acquiring technologies, brands and other assets in the developed countries (Deng, 2009; Luo and Tung, 2007; Mathews, 2006; Rui and Yip, 2008). Nevertheless, few investigations discuss whether a firm's heterogeneity in access to resources, determines CMNE SAS in what types (technologies or brands) via rapid foreign M&As.

Moreover, another dominant reason for firms' CBM&As is to promote their diversification strategy (Markiders and Ittner, 1994; Seth, 1990). Deng (2004) adds the diversification-oriented FDI strategy for CMNEs. The asset-seeking FDI is viewed as a 'spring-board' internationalization strategy (Luo and Tung, 2007). Thus, firms' expansion abroad for diversification purposes may be seen as a growth strategy or still SAS strategy in related or unrelated industries.

Ansoff (1957:113) highlights that "*the term 'diversification' is usually associated with a change in the characteristics of the company's product line and/or market, in contrast to market penetration, market development, and product development, which represent other types of change in product-market structure.*" Herein, in terms of product development, two main types of diversification may be included: related diversification and unrelated diversification. Moreover, Ansoff (1965) lists four major types of firm growth strategies:

Firstly, *market penetration* - stresses that firms seek more sales by using established products in their current (international) markets. Secondly, *market development*- firms seek more sales by taking established products into new (international) markets. Thirdly, *product development*-firms develop new products in their current (international) markets for increasing sales. Fourthly, *diversification growth* - Firms develop new products and take these into new (international) markets.

Arguably the fastest way to pursue international diversification growth directly, is to merge or acquire a relatively less-related existing foreign firm. In this research, I term this growth strategy as '*International product diversification'*.

Chinese firms' managers are believed to desire rapid diversification strategy (Li and Wong, 2003). As such, do CMNEs tend to seek an international product diversification strategy by acquiring related or unrelated foreign businesses? Likewise, no research discusses which home country effects in particular influence CMNEs' international product diversification via rapid foreign M&As and in what degree of relatedness.

As discussed previously, business groups contribute a lot to Chinese economic development. Business groups have been defined as groups of legally independent firms spanning across multiple industries (i.e. are diversified) and are connected with each other through persistent formal (such as equity) and informal such as (family) ties (Khanna and Rivkin, 2001). In particular, business groups occupy a dominant position in China and significantly contribute to China's OFDI (Sutherland, 2009), as well as many other developing countries, because their unique organizational mechanisms and capacities are appropriately adapted to the institutional voids found in emerging countries (Amsden and Hikino, 1994; Hikino and Amsden, 1994; Khanna and Palepu, 2000).

In South Korea, business groups are called Korean *chaebol* and a substantial number of them belong to pyramids consisting of two or three firms (Almeida, Park, Subrahmanyam, and Wolfenzon, 2011). Moreover, a large number of Korean *chaebol* firms that are owned by the family, have no ownership relationship with any other *chaebol* firms (Almeida et al. 2011). By comparison, the initial formation of business groups in China is to restructure China's large state-owned enterprises into business groups which cover different industries and geographic regions, and encourage them to become national champions so as to strengthen global market positions (Nolan, 2001). Furthermore, the group company generally represents the main characteristics of Chinese business groups, and all affiliated firms can share with the group company in elements of financial equity, human resources and business partners (Carney, Shapiro, and Tang, 2009). In addition, among member firms in Chinese business groups, there are strong social connections including family and school ties (Luo and Chung, 2005). Member firms may also have ownership links with any other Chinese business groups. As such, Chinese business groups may have access to more domestic resources than Korean *chaebol* firms.

According to in-depth interview research, Huang and Chi (2014) testify that the home country effects, mainly referred to the institutional environment and firms' availability of different types of resources, significantly determine Chinese POEs' market- and SAS FDI strategies. As for Chinese SOEs, one recent study has supported that home country effects (mainly in the forms of state ownership) determine their OFDI (e.g. Huang, Xie, Li, and Reddy, 2017; Luo, Xue, and Han, 2010).

Furthermore, by observing 27 CBM&As by Chinese firms, Boateng, Qian and Tianle (2008) find that Chinese firms' internationalization activities are mainly driven by rapid new market expansion, strategic asset acquisitions and international diversification.

Nevertheless, no empirical research has been developed to study whether specific home country effects determine CMNEs' SAS FDI and international product diversification strategy. Above all, do business group affiliation and state ownership types facilitate CMNEs' SAS and international diversification strategy (i.e. degree of relatedness) via international M&As? These are among the more important topics explored in this research.

1.3 Literature review

Do existing IB theories sufficiently explain EMNEs' (CMNEs in particular) specific FDI strategies? How do the business group affiliation and state ownership types affect firms' OFDI strategies? This section first discusses traditional theories in explaining

EMNE internationalization. Secondly, novel alternative models and perspectives are further discussed in explaining EMNE internationalization. Thirdly, by integrating the resource-based view (RBV) and the institution-based view (IBV), I develop a specific literature review, identifying unique home country effects on CMNEs' FDI strategies. The section will conclude with a table summarising extant empirical studies on CMNEs' FDI strategies.

1.3.1 Traditional theories

IB scholars have developed a number of theories to explain MNE internationalization. However, the majority of these theoretical contributions were based upon initial research exploring DMNE internationalization (Buckley et al. 2007; Ramamurti, 2012).

First of all, the internationalization process model also known as the "Uppsala model" suggests that firms follow an incremental learning process if they want to occupy foreign markets (Johanson and Vahlne, 1977, 1990). This learning process stresses that firms' internationalization depends on the amount of knowledge they have acquired (Andersen, 1993). As discussed above, EMNEs tend to undertake rapid CBM&As for reaching SAS purpose (e.g. Luo and Tung, 2007; Rui and Yip, 2008). Given rapid OFDI activities, some argue that this incremental Uppsala model may be inappropriate for exploring CMNEs' home country effects and explaining their FDI strategies. However, it is of interest to note that very few scholars have applied the Uppsala model to the case of EMNEs.

A firm should possess a firm-specific advantage to mitigate this liability of foreignness (Hymer, 1976; Zaheer, 1995). Due to the importance of networks in firms' internationalization, Johanson and Vahlne (2009) further revised the 1977 Uppsala model. In particular, the new version has been updated to include the role of network from liability of foreignness to liability of outsidership, referring to firms' problems in international business as being less on country-specific but on network-specific.

Secondly, eclectic paradigm, also known as the OLI paradigm, explain firms' FDI (Dunning, 1977, 1980). Drawing from Dunning (1980), MNEs' international activities are determined by three main factors including ownership (O) advantages, location (L) advantages and internalization (I) advantages. Then MNEs exploit these advantages by setting up foreign subsidiaries (Cantwell and Narula, 2001; Dunning, 1988, 2000, 2001).

Ayden (2015) argues that the OLI model integrates a series of IB theories such as transaction cost economics, internalization theory, and resource-based view/theory to explaining firms' FDI. According to the transaction cost economics view (Hennart, 1987; Williamson, 1979), the internalization theory accounts for firms' FDI being viewed as an approach to reducing transaction costs by coordinating activities internationally (Buckley and Casson, 1976; Rugman, 1980). Internalization theory explains that MNEs aim to control their FSAs (Rugman, 2010). However, many scholars argue that EMNEs may not have the same firm-specific ownership advantages that the OLI suggests (Kedia, Gaffney, and Clampit, 2012; Luo and Tung, 2007; Mathews, 2006).

Dunning's (1977) OLI model is a simple theoretical framework for helping us organise thoughts about the benefits of FDI. For instance, the ownership condition stresses that the firm must own some advantageous assets such as advanced technologies, known brands. The greater the competitive advantages of the investing firms, the more they are likely to increase their foreign production (Dunning, 2000) for exploiting their advantages. Also, the OLI model has been seen as the predominant one for analyzing firms' CBM&As (Dunning, 1993; Shimizu, Hitt, Vaidyanathc and Pisanod, 2004). Notwithstanding, the OLI model is relatively inappropriate for explaining EMNEs' foreign strategies, as they are comparatively lacking of competitive ownership advantages (Buckley et al. 2007; Mathews, 2006; Luo and Tung, 2007).

1.3.2 Alternative perspectives and models

Luo and Tung (2007:485-487) develop a springboard perspective to explain the determinants of EMNEs' FDI are to *'compensate for their competitive disadvantages', 'overcome their latecomer disadvantage', 'counter-attack global rivals', 'bypass stringent trade barriers', 'alleviate domestic institutional constraints', 'secure preferential treatment offered by emerging market governments', and 'exploit their competitive advantages in other emerging or developing markets'*. To some extent, given these seven determinants of FDI, the spring-board perspective theoretically supports my research on analyzing EMNEs' FDI and specific strategies.

Another somewhat similar perspective, primarily developed on multinationals from the Asia-Pacific region, is the linkage, leverage, and learning (LLL) model proposed by Mathews (2006). The LLL model suggests that latecomer and newcomer MNEs need to follow three processes before they derive competitive advantages. Firstly, they need step into a foreign market through joint ventures or other forms of collaborative partnership achieving linkage advantages. Secondly, based on established links with local partners or incumbents, latecomer MNEs can leverage resources accordingly. Thirdly, owing to repetitive application of linkage and leverage processes, latecomer MNEs can perform better via constant learning activities (Mathews, 2006). One criticism may be that not all DMNEs are willing to provide EMNEs with equal opportunity for achieving linkages.

In addition, Rugman (2010) argues that EMNEs' internationalization benefit from their exploitation of home-country competitive advantages including natural resources and low-cost labor force. These explanations are not satisfactory because home country location advantages cannot be equal to long-term competitive advantage and they are relatively available to all firms (Ramamurti, 2012). Buckley et al. (2007) suggest that EMNEs have developed their own specific ownership advantages including flexibility, better familiarity of operating in emerging market contexts, and other capacities for accessing the resources they require. In particular, Chinese SOEs can enjoy privileged access to cheap capital, which may subsidize their OFDI.

Furthermore, Hennart (2012) contends that most CSAs or location-determined advantages of countries are not liberally accessible to foreign firms. Alternatively, "*Many, such as land, natural resources, labor, and distribution assets, are sold in imperfect markets, giving their local owners significant market power.*" (Hennart, 2012:169) Some EMNEs that possess privileged access to CSAs have more competitive advantages that facilitate their OFDI. Thus, Buckley, Munjal, Enderwick and Forsans (2016) suggest that the bundling of assets argument is critically important for explaining why some EMNEs have FSAs through transforming CSAs. In the context of emerging economies, business group-affiliated firms may derive more CSAs as opposed to independent firms. Likewise, SOEs may enjoy privileged access to CSAs relative to POEs. Such arguments are comparatively consistent with Ramamurti's (2012) viewpoints that EMNEs may have differing ownership advantages. As a result, the bundling model, developed by Hennart (2009), could be another theoretical underpinning to account for CMNEs' FDI strategies. Therefore, whether business group affiliation and state ownership types also determine CMNEs' specific FDI strategies is worthy of further investigation.

Recently, through reviewing 166 articles from 11 leading IB and management journals, Luo and Zhang (2016:336) summarised the top five most used theories on studying EMNEs, including the 'resource-based view (RBV), institutional theory or the institution-based view (IBV), OLI model or eclectic paradigm, springboard perspective, and organizational learning theory'. As discussed above, does the integration of RBV and the IBV underpin the theoretical explanations of these two idiosyncratic attributes including business group affiliation and state ownership types?

1.3.3. Resource-based view

The RBV suggests "*what a firm wants is to create a situation where its own resource position directly or indirectly makes it more difficult for others to catch up*" (Wernerfelt, 1984:173). The core assumption of this perspective is that a firm's resources including tangible and intangible assets can create high returns (Wernerfelt, 1984). Barney (1991) further argues that resource heterogeneity and immobility are critical assumptions that enable us to understand sources of sustained competitive advantage. A firm's resource base must have four attributes so that it can maintain the potential of sustained competitive advantages: "*(a) it must be valuable... (b) it must be rare…(c) it must be imperfectly imitable, and (d) there cannot be strategically equivalent substitutes for this resource that are valuable but neither rare or imperfectly imitable.*" (Barney, 1991:105-106) The essence of RBV lies in that we may need to treat enterprises as independent analysis units when discussing the resources available to them. As such, it further reflects the importance of applying RBV in analyzing firms' international strategy (Hitt, Tihanyi, Miller and Connelly, 2006).

The emergence of business group is to respond to imperfect markets (Leff, 1978). Business groups are seen as a pool of resources which can facilitate member firms' internationalization (Carney, 2008a; Yiu, Bruton and Lu, 2005). For instance, member firms can enjoy a 'reputation premium' that business groups have, especially when there is higher cost involved in finding information (Khanna and Palepu, 1997).

Peng (2001) highlights that the RBV has largely encouraged scholars to explore the resources that drive firms to pursue various diversification activities. Many scholars have asserted that resources are significant antecedents of firms that choose to diversify internationally (Chang, 1995; Kotabe, Srinivasan, and Aulakh, 2002). This reputation premium of a business group may further assist member firms to expand a new market and easily achieve the economies of scale (Carney, 2008a).

As for location choices, EMNEs have found that they possess competitive advantages when operating in other emerging economies compared to their counterparts in developed countries, as EMNEs have accumulated experiences in similar underdeveloped institutional environment (Cuervo- Cazurra and Genc, 2008).

Du and Boateng (2015:431) state that "*the resource-based view literature suggests that one important reason for CBM&A [cross-border mergers and acquisitions] is to gain access to strategic assets, such as natural resources, product differentiation, patent-protected technologies, and superior managerial and marketing skills.*" The RBV may assist us extending the view of explaining variations in assets affect EMNEs' OFDI (Wang et al. 2012). To address the liability of foreignness, EMNEs may choose to possess different types of resources such as cheap labor, natural resources or a focus on domestic markets, since they are largely lacking in traditional resources (i.e. technologies, brands etc.) (Gaur, Kumar, and Singh, 2014). Moreover, firms in emerging economies owned by different government levels are likely constrained in making decisions to internationalize (Wang et al. 2012). Chinese POEs also face a different institutional environment for their OFDI (Luo, Xue, and Han, 2010).

In terms of industry, most Chinese POEs have to operate in competitive industries including textiles, and electronics, while most SOEs are involved in oil and gas, and telecommunications services (Huang and Chi, 2014). Such differences of treatment not only influence Chinese POEs' motives of internationalization, but also accumulate resources and abilities. In contrast, the Chinese government may offer SOEs with tax reductions and financial support supporting their CBM&As (Luo et al. 2010; Peng, et al. 2008). Additionally, there is a predetermined target of state-directed Chinese OFDI for achieving advanced technology, and other intangible strategic assets such as brands, marketing networks and foreign management capacities (Taylor, 2002; Deng, 2003; Warner, Hong, and Xu, 2004). Thus, Deng (2013) suggests that the RBV can be seen as the primary theory in analyzing CMNEs' catch-up strategies.

Oliver (1997:697) argues that "*the resource-based view has not looked beyond the properties of resources and resource markets to explain enduring firm heterogeneity.*" The RBV somewhat enables us to identify CMNEs' unique advantages due to idiosyncratic resources that mainly come from their specific organization forms such as business groups and SOEs.

Wang, et al. (2012:657) further argue that "*While the RBV suggests that the internationalization decision is economically justified, and depends on idiosyncratic resources, institutional theory argues that such decisions are the outcome of isomorphic pressures and political influences.*" Recent extension of the RBV has focused on nonmarket-based factors such as political resources and capacities as opposed to the traditional view of focusing on market-based resources and capabilities (Oliver and Holzinger, 2008). Then, the IBV could be also employed to explain the importance of business group affiliation and state ownership types in explaining CMNEs' FDI strategies.

1.3.4 Institution-based view

The IBV led by North (1990) and followed by others suggests that national institutions can be regarded as the rules of the game that influence firms' strategies. Moreover, North formally defines institutions as "*the humanly devised constraints that structure human interaction*" (1990:3), which contains formal institutions (i.e. laws, regulations) and informal institutions (i.e. social customs, norms, cultures). The organizational form of business groups is to address the voids that emerging economies lack the effective formal and informal institutions (Khanna and Palepu, 1997, 2000). In comparison, SOEs' behaviors or strategies may be more influenced by formal institutions, while POEs' may have to address both formal and informal institutions.

Furthermore, Sahaym and Nam (2013:426) describe that "*A country's institutional* *environment consists of a set of political, social, and legal ground rules that fix the basis for production, exchange, and distribution within a syste*m." Thus, firms may derive different advantages in different home country institutions. MNEs' competitive advantages depend on institutions in their home country (Dunning, 2000).

In terms of institutional regulation, institutions in emerging economies are largely ineffective compared to those in developed economies, and thus business groups are prevalent in emerging economies and have been seen as a response to institutional voids (Carney et al. 2011; Change and Hong, 2000; Khanna and Palepu, 1997; Khanna and Yafeh, 2007). China is no exception. Before the mid-1980s, there were no business groups in China; in the mid-1980s, the Chinese government started to promote industrial reform, encouraging firms to form business groups (qiye jituan) (Keister, 2009).

Yiu (2011) has proposed that this organizational form has 'multinational advantages' that may facilitate CMNEs' FDI activities. Specifically, business group affiliated firms can fill the voids of imperfect markets and institutions in emerging economies. This includes imperfect capital, labour and product markets, not to mention facilitation of technology acquisition via internalization processes (Carney et al. 2011; Goto, 1982; Khanna and Palepu, 1997; Leff, 1978). Specifically, business groups form internal capital markets, for example, which gives their affiliated firms access to lower cost capital (Khanna and Rivkin, 2011). Similarly, internal labour markets allow member firms to draw from an internal pool of labour resources, mitigating the inefficient markets found in emerging economies. These internal labour markets may facilitate internationalization. Meanwhile, internal product markets allow for member firms' sharing of reputation and brand, again lowering information costs for consumers (Khanna and Palepu, 1997). Owing to internal markets, business groups create lower transaction costs (i.e. by addressing information problems and addressing such things as a weak legal institutional environment) (Wright et al. 2005). Furthermore, business groups may internalize the capability of technological learning, which is consistent with the lines of Mathews' (2006) LLL model.

Accordingly, institutions may affect CMNEs pursuing different FDI strategies. Peng, Wang and Jiang (2008) regard an IBV[4] of IB strategy as one leg of the '*strategy tripod*' (the other two legs consisting of the industry- and resource-based views). Peng et al. (2008:920) state that this IBV assists to respond to the most fundamental questions in IB, such as "*What drives a firm's strategy in international business (IB)?*"

As Ramamurti (2009) observes, in the first decade of the 20th century, the development of capabilities and institutional support have facilitated the transition of less-developed countries such as Brazil, Russia, India, China, and South Africa to become the most influential emerging economies. According to Peng, et al. (2008), institutions maintain this market mechanism's effective functioning, which help firms and individuals avoid incurring undue costs or potential risks while they are involved with the market transactions.

Scott (1995) argues that there are three pillars of institutions including the regulative pillar, the normative pillar, and the cognitive pillar. In spite of its market economy's increasing development, China somewhat maintains a political economy whereby government involvement plays a significant role in business by owning and regulating (Deng, 2007). Government affiliation likely affects Chinese firms' resource use to go abroad by imposing coercive pressures and normative expectations (Wang et al. 2012), which are consistent with Scott's (1995) explanations of the regulative pillar and the normative pillar. Moreover, Huang and Chi (2014) assert that Chinese SOEs have a favorable institutional environment as opposed to POEs because Chinese governments consider SOEs to be the pillars of the national economy. In this respect, Scott's (1995) cognitive pillar has also been explained by Chinese SOE and POEs. Further, Wang et al. (2012) argue that Chinese SOEs may suffer differing institutional pressures due to

[4] The term 'an institution-based view of business strategy' was first proposed by Peng (2002).

different government affiliation levels. The different government levels have divergent strategic goals and access to different resources (Sun, Mellahi, and Thun, 2010).

In terms of firm-level capabilities, CMNEs' accumulated firm-specific advantages are largely dependent on domestic market size, the cheap labor force, and relevant supportive policy from the state (Collinson and Rugman, 2007). Given governments' support, Chinese SOEs would accumulate more FSAs in creating value. Du and Boateng (2015) have provided strong evidence that the government and institutions largely determine Chinese firms' value creation process in their course of internationalization via CBM&As. Moreover, state ownership also plays a significant role in CMNEs' FDI location choice (Duanmu, 2012). Prior empirical studies reveal that state ownership significantly determines the pattern of Chinese OFDI (Amighini, Rabellotti, and Sanfilippo, 2013; Huang, Xie, Li, and Reddy, 2017).

As for financial resources, its ownership may critically determine firms' growth (Doukas and Lang, 2003). In China, the main Chinese banks are largely owned and controlled by Chinese governments (Morck et al. 2008) and primarily operated to support SOEs' activities (Huang and Chi, 2014). In contrast, many Chinese POEs may have to rely on private capital or raise capital via tax havens when they go international (Sutherland and Ning, 2011). Given the financial resources, firms can sustain competitive advantages through investing more on research and development (R&D) activities, marketing campaigns, and employment of talents. More engagement in R&D activities may allow firms to achieve technological resources (Martin and Salomon, 2003) and further sustain competitive advantages. In other words, institutional influences not only determine the resources available to Chinese firms but also their different FDI strategies.

On balance, integrating the RBV and the IBV into analyzing CMNEs' OFDI enables us to identify the two idiosyncratic firm-level attributes: business group affiliation and state ownership types.

Also, Table 1.1 summarizes 22 empirical studies on CMNEs' OFDI strategies. However, no research has been developed to investigate the extent to which business group affiliation and state ownership types affect CMNEs' specific SAS FDI in types and properties and international product diversification strategy.

Table 1.1 Empirical studies on Chinese MNEs' OFDI strategies 1

Authors	*Investment mode*	*Theoretical framework*	*Identification of home country effects*	*Sample period; variables for proxies of FDI strategies*	*Analytical approach*	*Key findings on FDI strategies*
Anderson and Sutherland, 2015	Greenfield investments and M&As	Bundling model; Spring-board perspective	Institutional support: state ownership vis-a-vis private ownership	2003-2011, 380 greenfield deals and 160 acquisition deals; Chinese FDI in US: DV-frequency county of Chinese FDI projects in the host state; IDV-strategic assets: three-way linear additive composite of (1) state share of US Fortune 500 companies, (2) state share of Masters of Business Degrees Awarded, (3) state share of national utility patents registered; Market-Gross State Product; Natural resources-raw material exports (earths and stones, ores and fuels)	Negative binomial models	EMNEs tend to use acquisitions to seek strategic assets than greenfield investments; Chinese SOEs were not likely to seek strategic assets, but POEs did seek strategic assets via M&As; Insignificant results on market seeking variable and resource seeking variable
Boateng, Qian and Tianle, 2008	M&As	Resource-based view and organizational learning	Not included	2000-2004, 27 cross-border M&As; The data relating to the motives of M&As are from the *China Daily* newspapers and *China Securities*	Statistical analysis	Chinese firms are mainly driven by market development so as to further expand into new markets, promote diversification, and achieve advanced technology.
Buckley, Clegg, Cross, Liu, Voss, and	FDI	OLI paradigm and institutional theory	Not included, but theoretical propositions (State ownership; inefficient	1984 and 2001; DV: Annual outflow of Chinese FDI; IDV: Market-Host country GDP per capital; Natural resources-the ratio of	Random effects (RE) generalized least square	Chinese outward FDI is positively associated with host market size (1984-1991) ('*market seeking*') and host natural resources endowments (1992-2001)

Zheng, 2007			banking systems; conglomerate firms with inefficient internal capital market; and family owned firms)	ore and metal exports; Strategic assets-Total annual patent registrations in host country	method	(‘*resource seeking*’); insignificant finding on ***asset seeking***
Cui, Meyer, and Hu, 2014	Institutional theory	Strategic choices is driven by decision makers’ awareness, motivation, and capability (AMC)	State ownership vis-a-vis private ownership	2007 and 2010, 1047 Chinese manufacturing firms that are listed in China; DV: the SAS intent of FDI is a latent construct measured by a survey instrument	Hierarchical regression method	Private ownership is significantly and positively related to Chinese firms’ SAS intent. There is no significant relationship between private ownership and Chinese firms’ market seeking intent.
Deng and Yang, 2015	M&As	Resource dependence theory	Government ownership	2000-2012; DV: the number of cross-border M&As in host market; IDV: market-seeking: the ratio of stock market capitalization to GDP; natural resource-the ratio of ore and metal exports; strategic assets-the number of patent registrations	Random-effect negative binomial regression	There are significant and positive relationships between Chinese cross-border M&As and the size of host market and the richness of natural resources and strategic assets of developed countries; Host government effectiveness in developing countries also significantly and positively moderates the relationships between Chinese cross-border M&As and the market size and richness of strategic assets of developing countries; Cross-

						border M&As by government-owned EMNEs are most associated with seeking natural resources (including Chinese government-owned firms)
De Beule and Duanmu, 2012	M&As	Traditional economic factors and host country institutional perspective	Not included	2000-2008, 121 and 531 acquisitions by Chinese and Indian firms respectively; DV: whether or not the M&A entry would take place in a host country IDV: natural resource-the share of ores and metals exports; strategic assets-both patent and trademark applications	Conditional logistic regression	Chinese firms are not likely to seek out resource-rich countries or strategic asset endowments either; But in high tech manufacturing, Chinese acquisitions are more likely to target countries with higher level of technological assets, other than brand assets
Hong, Wang, and Kafouros, 2015	FDI	Institutional theory and resource-based view	State ownership; business group affiliation (control variable)	2006-2007; 615 Chinese manufacturing firms and 11 mining farms; DV: each firm's actual amount of annual overseas investment; IDV: state ownership (share); group affiliation (dummy variable)	Ordinary least square regression (OLS)	State ownership and business group affiliation significantly facilitate Chinese firms' international expansion; Government specific industry policy significantly and positively moderates the relationship between state ownership and Chinese firms' foreign expansion.
Huang and Chi, 2014	FDI	Institutional perspective and resource-based view	Private ownership vis-a-vis state ownership	Chinese POEs' outward FDI from Zhejiang Province; interviewing ten senior managers from five Chinese POEs located in the City of Wenzhou; Five firms have long history in international operations (5-10 years).	In-depth interviews with senior managers and extensive	Domestic market position largely determines Chinese POEs' foreign market selections; After the global financial crisis, Chinese POEs use cross-border M&As to seek strategic assets. Chinese POEs use three

					secondary data analysis	approaches: firstly, acquiring international competitors, secondly, vertical integration, and thirdly, buying a single strategic asset such as brand name, technology, or R&D
Huang, Xie, Li and Reddy, 2017	FDI	Resource-dependence theory	State ownership	2007-2013; 507 Chinese publicly-listed manufacturing SOEs; DV: newly established foreign subsidiaries in each year; IDV: Central SOEs-if a SOE' largest shareholder or ultimate controller is the SASAC of the State Council; Local SOEs-the largest shareholder or ultimate owner is the SASAC of local governments including provincial, municipal or county governments	Zero-inflated Poisson regression	A high percentage of state-owned shares has negative effect on SOEs' outward FDI; the negative effect will be reduced by institutional development and competition intensity; Compared with local manufacturing SOEs, central SOEs are less likely to engage in outward FDI
Kang and Jiang, 2012	FDI	Traditional economic factors and institutional perspective	Not included	1996-2008; DV: FDI stock from Chinese firms in each of the eight host Asian economies IDV: market-seeking-GDP per capital; Resource-the ratio of ore and metal exports; Strategic assets-patent applications	Panel data with random-effects model	Insignificant result on market seeking hypothesis; resource seeking is found significantly related to Chinese firms' FDI in developing countries; No test on strategic-asset seeking hypothesis
Lin, 2015	Approved FDI projects	Traditional economic	State ownership	2003 and 2012; 633 China's outward FDI projects in Latin America and the	Random effect	Chinese SOEs are more likely driven by the motivation of resource-seeking in

		factors and institutional perspectives		Caribbean; State ownership: the ultimate controlling shareholder	negative binomial regression model	Latin America and the Caribbean, while Chinese POEs are more market-seeking.
Lu, Liu, and Wang, 2011	FDI	Integration of resource-based, industry-based and institutional-based views	Private ownership	A questionnaire survey on private firms conducted in 2008; DV: the importance of strategic-asset seeking and market-seeking FDI (1=not important, 5=very important); strategic assets include technologies, brands, high-end human resource	Survey data analysis	Supportive government policies are important motivations for Chinese POEs' both strategic asset seeking and market-seeking FDI.
Lu, Liu, Filatotchev, and Wright, 2014	International diversification	Knowledge-based view	State ownership	2002-2009, 1027 publicly listed firms with 12,557 subsidiaries in total in 2009 (553 overseas subsidiaries); DV: the extent of firms' investment across countries; IDV: the percentage of shares owned by the government and SOEs (the ultimate shareholder)	Panel Tobit model	State shareholding is negatively and significantly related to Chinese listed firms' international diversification
Lu, Liu, Wright and Filatotchev, 2014	FDI	Knowledge-based view and institutional-based view	Government ownership	2002-2009, 74 Chinese publicly listed firms among 53 countries; DV: Entry dummy, equals 1 if sample firm has conducted a new subsequent entry in the target country; IDV: Government equity share: equity shares owned by government agencies	Panel Logit model with fixed effects	Government ownership share has a positive and significant role on Chinese firms' outward FDI decisions.

Ramasamy, Yeung, and Laforet, 2012	FDI	Dunning's eclectic paradigm	State ownership vis-a-vis private ownership	2006-2008, 63 public listed Chinese firms with 1350 foreign projects across 59 countries; IDV: Market: GDP per capital, resource-the ratio of ores and minerals, strategic assets-number of registered patents, host country's exports of high technology products	Poisson count data regression	Chinese central government-controlled firms are more likely to go to politically stable countries for strategic asset seeking motives, showing a clear difference between SOEs; Chinese POEs follow that SOEs by investing in natural resource rich countries and provide related products and services; Chinese firms are attracted by commercially viable technology rather than core research content
Sun, Peng, and Tan, 2017	International diversification	Institution-based view and traditional economic factors	CEOs with political ties; State ownership	The number of Chinese listed firms ranges between 846 in 2001 and 1576 in 2011Chinese listed firms (excluding financial service-related firms); DV: International diversification-the extent of exposure to foreign markets; State ownership- 1 equals to the ultimate controlling shareholder of the firm is the state	Multilevel regression models	CEOs with political ties are negatively related to firms' international diversification, while CEOs with international experience are positively related to firms' international diversification; There is no significant relationship between state ownership and Chinese listed firms' international diversification
Wang, Hong, Kafouros, and Wright, 2012	FDI	Resource-based view and institution-based view	State ownership, government affiliation level	2006-2007, 626 Chinese manufacturing firms; DV: the actual amount of annual outward FDI by each firm; IDV: the degree of state ownership;	Hierarchical OLS regression	State ownership drives Chinese manufacturing firms' resource-seeking FDI, whereas affiliation to higher government affiliation levels influence market seeking FDI;

				government affiliation level including state, provincial, city, county and other levels; business group affiliation (dummy variable)		No significant influence found on business group affiliation
Wu and Chen, 2014	FDI	Institutional theory	Government ownership	1996-2000, a survey covered 300 Chinese firms' foreign expansion to US market DV: dummy variable that 1 equals to firms expand to US market; IDV: Government ownership-the percentage of stakes owned by governments	Stepwise hierarchical regression approach	There is a significant and positive relationship between government ownership and the propensity of foreign expansion; And government ownership negatively moderates the relationship between institutional development and the likelihood of foreign expansion
Wu, Pangarkar and Wu, 2016	Regional and Global diversification	A perspective on regional and global strategies of MNEs	Not included	1998-2000, a survey on 625 Chinese manufacturing MNEs; Global diversification reflects a level of firm's global diversification	Tobit regression model	Regional diversification can significantly predict firms' global diversification; firm-specific technology and marketing know-how both increase the propensity of a firm's moving from regional to global diversification
Xia, Ma, Lu and Yiu, 2014	FDI	Resource dependent theory	State ownership; Business group experience	2001-2007, 780 Chinese listed firms across 28 industries; DV: a count of outward FDI projects (i.e. foreign subsidiaries); IDV: state ownership-all the shareholders' proportion of SOE shares; business group experience-the logarithm of the year since the	Zero-inflated negative binomial regression model	State ownership has a significantly negative effect on Chinese firms' outward FDI, while business group experience has positive effects.

				formation of business group		
Yang and Deng, 2017	M&As	OLI paradigm and institutional theory	State ownership	1996-2012, Chinese cross-border M&As in developed markets; DV: the number of completed cross-border M&As by Chinese firms; IDV: market- host country GDP; natural resources- the share of fuels, ores, and metals exports; strategic assets-the number of patents registered in the host country	Negative binomial regression model	Host countries' market size, natural resources and strategic assets positively determine the number of Chinese cross-border M&As; Chinese government involvement strengthens the main effects of market seeking, natural resource seeking, and institutional environment; The effect of strategic asset seeking is significant in both government- and non-government-involved Chinese cross-border M&As
Zheng, Wei, Zhang, and Yang, 2016	M&As	Resource-based view, Linkage, Leverage, and Learning (LLL) and springboard perspective	Not included	Three case studies; Chinese manufacturing MNEs' cross-border M&As in the UK in recent years	Multiple case study	Results show that Chinese MNEs are interested in global brands, advanced technologies, and technological and marketing capabilities.
Notes: DV refers to dependent variable and IDV refers to independent variable; SOEs, state-owned enterprises; POEs, privately-owned enterprises						

1.3.5 An overview of research methodologies

A lot of studies use aggregate FDI data to explore CMNEs' internationalization. However, as Sutherland and Anderson (2015) point out, many of these studies do not use data properly. This is because around 80% of Chinese FDI is found in Hong Kong, the Cayman Islands and British Virgin Islands (Morck, Yeung, and Zhao, 2008). Most of this, however, is capital in transit. The most cited IB study on the determinants of China's OFDI, Buckley et al.'s (2007) empirical work, utilized questionable FDI data (before 2001, when Chinese POEs were not officially allowed to invest in foreign countries) (Huang and Chi, 2014). Kolstad and Wiig (2012) contend that their results are likely biased because there are also unofficial FDI flows from Chinese POEs that they may have different motives of FDI. Other scholars such as Beugelsdijk et al. (2010) have pointed out the drawbacks of research based on aggregate FDI flows and stocks, which overestimate or underestimate subsidiary activity varying with host-country characteristics.

Moreover, Amighini et al. (2014) argue that the reliability of using aggregate data in empirical research on China's OFDI, has not been sufficiently investigated because FDI data largely ignores relevant features including the details of industry composition, ownership structure and modes of foreign entry. Similarly, De Beule and Duanmu (2012) highlight that research using aggregate data neglects the characteristic of industry specific and firm-based heterogeneity. In a review of 112 empirical papers about Chinese OFDI published between 2002 and 2014, Quer, Claver, and Rienda (2015) argue that more empirical research using firm-level data is highly required.

Extant studies were mainly based on either aggregate official data or case studies, which to some extant limit the research generalization (Quer, et al. 2015). Although the OFDI data can represent EMNEs' increasing multinationalisation, it by and large shows us a macro picture (Cuervo-Cazurra, Newbury, and Park (2016). Since government involvement in China's economy has been widely recognized, it is required that analysis is at the firm level be taken more into consideration (Morck, Yeung and Zhao, 2008; Wang, Hong, Kafouros, and Wright, 2012).

There are several primary modes of internationalisation by Chinese firms including exports, Original Equipment Manufacturer (OEM), joint ventures, M&A, and greenfield investment (Child and Yan, 2001). At the beginning of the 1980s, export was particularly the most popular entry mode for Chinese companies when the central government promoted the 'Open Door' policy (Peng, 2000). This entry mode largely benefits from this special development path, the Original Equipment Manufacturer (OEM). It can integrate Chinese companies' cost advantage with foreign firms' brand advantage, reaching economies of scale (Peng, 2000). This development path has facilitated Chinese companies' further foreign expansion. For example, Galanz, located in Guandong Province, has been the largest microwave oven manufacturer in the world for years (Sodhi and Tang, 2013).

These days, CBM&As have been regarded as having the fastest approach for achieving expected targets when firms go international (Agyenim et al. 2008). Peng (2012) suggests CBM&As are the preferred mode of entry for CMNEs. The World Investment Report 2017 by UNCTAD suggests that a surge of CBM&As by Chinese firms drive this country's OFDI, which propel it to firstly become the second largest investor in the world. According to recent news by CGTN[5], "*M&A is the major approach for overseas investment for Chinese enterprises; about 88 percent of over 2,858 agreements by Chinese companies overseas were completed via M&A between 2000 and 2016 [Center for China and Globalization]*" (Nian, 2017). For example, the acquisition of IBM's personal computing division allows Lenovo to continually use the IBM brand and worldwide distribution networks, making Lenovo the third largest computing company in the world (Deng, 2007). On the other hand, the greenfield investment mode is relatively time consuming for firms seeking SAS FDI. Thus, it is suggested '*EMNEs*

[5] CGTN refers to China Global Television Network, which is owned by China Central Television or Government of the People's Republic of China.

will try to overcome their latecomer disadvantage through aggressive, proactive and risk-taking acquisitions' (Kedia, Gaffney and Clampit, 2012:159).

Therefore, in this research I examine CBM&As by CMNEs. The most important approach, however, is the employment of firm-level data that can account for ultimate ownership. This circumvents some of the problems found with the use of official FDI data above.

1.4 Research agenda

Increasing internationalization of EMNEs through acquisitions has significant implications for theory building (Peng, 2012). It presents an excellent opportunity to revisit theories, provide new empirical evidence, and find new theoretical explanations (Ramamurti, 2012). The M&A has been seen as a faster mode of market entry for EMNEs, including CMNEs (Deng, 2009; Luo and Tung, 2007) to expand their international product and consumer markets (Chen and Findlay, 2003; Deng, 2007, 2009; Li, 2007; Wang and Boateng, 2007), and in particular to acquire strategic assets in international markets (Agyenim et al. 2008; Deng, 2009; Luo and Tung, 2007; Rui and Yip, 2008). Luo and Wang (2012) focus on home country environment parameters (e.g. economic growth, institutional environment, competitive pressure, and other macro level factors) and study their influences on 153 CMNEs' overseas investment sales (measured by assets and employment scales respectively). CBM&As provide us a chance to directly observe firm-level activities. Then, instead of measuring home country parameters, I specifically focus on acquirers' business group affiliation and state ownership types, investigating whether these two factors make a significant difference on CMNEs' FDI strategies. The following three research projects are presented:

Study 1- to explore the role of business group affiliation on CMNEs' SAS *orientation by disaggregating strategic assets in detailed types and natures*

Chari (2013) has identified that business group affiliation significantly drives Indian MNEs' FDI. It may imply that emerging-economy firms affiliated to business groups have more competitive advantages. Nevertheless, no empirical research has been developed to explore whether business group affiliation determines EMNEs' SAS FDI. More importantly, many academic studies rely upon patents as the key empirical proxy of SAS orientation, even though they highlight that strategic assets refer to both cutting edge technologies and brands, among other things (Buckley et al. 2007; Drogendijk and Blomkvist; Li, Li, and Shapiro, 2012; Ramasamy, Yeung, and Laforet, 2012). To the best of my knowledge, however, there are no empirical studies that clearly distinguish between the different types of strategic assets that are targeted by CMNEs.

Study 2-to what extent state ownership types influence CMNEs seeking what specific types of strategic assets (i.e. technology-, brand-based assets or both) and natural resources

Cuervo-Cazurra et al. (2014) argue that existing theory does not present a consistent prediction of the state ownership influence on MNEs' OFDI. Luo, Xue and Han (2010) suggest that two views, including institutional escapism and governmental promotion, seem to be paradoxical. The actual influence is likely attributed to firms' heterogeneity in industries and ownership. For example, SOEs may be significantly affected by the government promotional force, while the force of institutional escapism largely influence POEs (Luo, Xue and Han, 2010). Investigating all Chinese firms' OFDI between 2006 and 2007, Wang, et al. (2012) find out that a higher government affiliation level significantly determines FDI in developed markets. For Chinese publicly-listed manufacturing SOEs between 2007 and 2013, Huang, Xie, Li, and Reddy (2017) reveal that central SOEs are less likely to undertake OFDI than local SOEs. To a certain extent, these inconsistent findings are inappropriate for assessing the influence of state ownership on CMNEs' FDI strategies. Following prior studies (e.g. Buckley et al. 2007; Hennart, 2012; Ramamurti, 2012), I add to the under-researched area concerning the special ownership advantages for EMNEs, with a particular reference to CMNEs.

Study 3-To investigate the extent to which business group affiliation and state ownership types affect CMNEs' international product diversification.

There are an increasing number of research studies on the relationship between the international diversification of firms in emerging countries and their financial performance (Gaur and Delios, 2015; Guar and Kumar, 2009; Kim, Kim, and Hoskisson, 2010; Li and Wong, 2003; Lu and Yao, 2006). Nevertheless, if we cannot clearly identify which specific factors determine firms' international diversification strategy, the evaluation of their financial performance is relatively ineffective and insufficient.

To this end, the greatest contribution from studying EMNEs lies in providing us space to further improve on extant theories of the internationalization process, other than simple finding about whether and how EMNEs react differently from DMNEs (Ramamurti, 2012).

Chapter 2: Business Group Affiliation and Strategic Asset Seeking Orientation

2.1 Introduction

> *"Since large numbers of firms in many developing countries are affiliated to business groups, if business groups facilitate the FDI of their affiliates, this would contribute to our understanding of the drivers of developing country firm FDI."*
> *(Chari, 2013: 349)*

Owing to a lack of firm specific advantages (FSAs), especially in R&D and marketing, the increasing foreign direct investment (FDI) by Emerging-country (E) Multinational enterprises (MNEs) poses a theoretical puzzle to extant theory to explain their internationalization activities in overcoming liabilities of foreignness (LOF) and foreign expansion (Luo and Tung, 2007; Mathews, 2006; Ramamurti, 2009). EMNEs are often considered different to developed-country (D) MNEs, because of their strategic-asset-seeking (SAS) intent, undertaking outward (O) FDI such as cross-border mergers and acquisitions (CBM&As) to augment, rather than exploit, existing FSAs. This is the so-called 'late-comer' (Child and Rodrigues, 2005), 'springboard' (Luo and Tung, 2007), or 'strategic intent' perspective (Rui and Yip, 2008). EMNE OFDI strategies, these perspectives argue, are insufficiently explained by existing theory (such as the OLI paradigm), launching the call for further extended theoretical contributions to explain the behavior of EMNEs (Buckley et al. 2007; Child and Rodrigues, 2005; Cuervo-Cazurra, A. 2012; Luo and Tung, 2007; Mathews, 2006; Narula, 2012; Yiu, 2011). One explanation given to explain the unusual OFDI strategy of EMNEs is the predominance of market imperfections in emerging markets and the presence of business groups, formed to address these institutional voids. This study, therefore, focuses on the impact of the domestic market environment in which EMNEs have evolved. These so-called home country effects (HCEs) are thought to be important in shaping their unusual strategies and behaviours (Cuervo-Cazzurra, 2012: Hertenstein, Sutherland and Anderson, 2015). Yet, there is still comparatively limited research on exactly which HCEs influence EMNEs' SAS activities. This is important, because, as noted, explaining SAS is central to understanding the current conceptual debate regarding the need for new paradigms to understand EMNEs (i.e. is the OLI model redundant ?). As discussed in chapter one, integrating the resource-based view (RBV) and institution-based view (IBV) allow us to further discover the role of business group affiliation on Chinese MNEs' specific FDI strategies.

Business groups occupy dominant positions in China (Sutherland, 2009), as well as many other developing countries, as their unique organizational mechanisms and capacities are appropriately adapted to the institutional voids found in emerging countries (Amsden and Hikino, 1994; Hikino and Amsden, 1994; Khanna and Palepu, 2000). Drawing on Mathews's (2006) LLL framework (linkage, leverage and learning), scholars (i.e. Yiu, 2011; Chari; 2013; Hennart, 2012; Ramamurti, 2012) propose that the organizational form of business groups may facilitate internationalization activities, including SAS. Their unique attributes, such as internal markets, inward linkages, and institutional support, as Yiu (2011) argues, potentially provide additional support to SAS FDI activities. As for Chinese MNEs (hereafter CMNEs), China's large business groups do undertake a considerable proportion of Chinese OFDI (Sutherland, 2009). Despite the importance of Chinese business groups in OFDI, no empirical research has yet specifically explored the extent to which business group affiliation[6] in China affects the volume and likelihood for SAS FDI. Does business group affiliation actually spur SAS related FDI? Does group affiliation therefore provide one possible explanation for why EMNEs exhibit different OFDI characteristics?

[6] In this study, business group affiliation refers to those Chinese businesses affiliated to a large business group.

In addition, many academic studies rely upon patents as the key empirical proxy of SAS orientation, even though they highlight that strategic assets refer to both cutting edge technologies and *brands*, among other things (Buckley et al. 2007; Drogendijk and Blomkvist; Li, Li, and Shapiro, 2012; Ramasamy, Yeung, and Laforet, 2012). As far as I know, however, there are no empirical studies that clearly distinguish between the different types of strategic assets that are targeted by CMNEs. Do foreign technology and brand-related assets both attract CMNEs to pursue OFDI to the same extent? Arguably, both possess slightly different properties, with the former having stronger non-location-bounded (NLB) properties *vis a vis* the latter, which are more location bounded (LB). Furthermore, does CMNEs' business group affiliation determine their specific SAS FDI strategies? This research therefore concentrates on the study of CMNEs' OFDI activities on the firm-level, with regards to business group affiliation and the particular type of SAS orientation (i.e. NLB and LB). It mainly employs data about their CBM&As from the period between 2006 to 2015.

First, I discuss the distinction between specific types of strategic assets that CMNEs seek via CBM&As. Following that, I formulate some hypotheses about the relationship between business group affiliation and specific types of SAS FDI activities. Secondly, I explain the methodology, involving a pooled data set of 843 completed CBM&As. Finally, I discuss the implications of the findings and implications for future research.

2.2 Literature Review

There are many definitions of business groups. One definition, for example, is that they are groups of legally independent firms that cross multiple industries (i.e. are diversified) and are connected with each other through persistent formal (such as equity) and informal such as (family) ties (Khanna and Rivkin, 2001). However, one way of thinking about business groups is not with respect to any single definition (for there is considerable heterogeneity among groups) but rather by their internal characteristics and the functions that they fulfil. In particular, their ability to address institutional voids via internal capital, labour and product markets is often remarked (Carney, Essen, Estrin, and Shapiro, 2017; Granovetter, 1995; Kedia, Mukherjee, and Lahiri, 2006; Khanna and Palepu, 1997; Lee, Peng, and Lee, 2008). This allows business group affiliated firms to have more channels and potentially stronger capacities than independent firms. It raises the further question of whether group affiliated firms seek strategic assets in the course of OFDI, and whether there are any differences to those of independent firms.

2.2.1 The location boundedness of SAS activities

EMNEs may achieve these strategic assets by undertaking rapid and aggressive CBM&As of DMNEs to alleviate latecomer disadvantages including technological backwardness, lack of known brands, and other home-country institutional voids (Buckley et al. 2007; Deng, 2009; Luo and Tung, 2007; Rui and Yip, 2008). Strategic assets that EMNEs acquire can assist in reducing their latecomers' liability of foreignness (LOF) and competing with rivals in developed economies (Luo and Tung, 2007). The key point, however, is that the existing EMNE literature does not clearly identify the different types of strategic assets.

Drawing from Rugman and Verbeke's (1992) work, I distinguish two types of strategic assets: non-location bounded (NLB) and location bounded (LB) strategic assets.

The NLB-FSAs are defined as:

> "*FSAs that can be exploited globally, and lead to benefits of scale, scope or exploitation of national differences. In the context of FDI, the NLB-FSAs can be transferred abroad at low marginal costs and used effectively in foreign operations without substantial adaptation. All of a multinational's FSAs of a transaction cost nature typically fit into this category.*"

In comparison, LB-FSAs are defined as:

> "*FSAs that benefit a company only in a particular location (or set of locations), and lead to benefits of national responsiveness. In the context of FDI, these LB-FSAs cannot easily be transferred and require significant adaptation in order to be used in other locations.*" (Rugman and Verbeke, 1992:763).

Previous studies have '*failed to identify empirically or explain precisely the difference*' between NLB and LB strategic assets (Collinson and Rugman, 2008:7). As the definition of NLB FSAs previously discussed, the FSA concept is accordingly broad in coverage and hard to capture and measure empirically.

Regardless of its effectiveness, patents are the most commonly used proxy for SAS FDI in the extant EMNE literature (Buckley et al. 2007; De Beule and Duanmu, 2012; Drogendijk and Blomkvist, 2013; Li et al. 2012; Ramasamy, Yeung, and Laforet, 2012). More significantly, NLB FSAs are thought to contain high levels of codified knowledge. Thus, patents largely fit this description because the patenting also involves explicit description of the intellectual property being registered. Compared to tacit knowledge, codified knowledge is more easily transferred between countries.

As opposed to codified knowledge, for example, firms' '*reputational resources*' are not transferable in most cases because they may lose value when transferred across. Hence, it qualifies as a LB FSAs (Verbeke and Kano, 2015:421-422). Moreover, brands, to a greater extent, are a firm's reputational resources because they act as identifiable signaling mechanisms, which make commodities distinguishable in the markets that firms mainly operate in. As a result, most brands of any value are typically registered as trademarks for the purpose of intellectual property rights protection, and the number of trademarks owned by a target firm could be potentially utilized as a proxy for LB FSAs. In addition, although LB FSAs may also refer to human capital, networks and so on, in this research I mainly focus on the use of trademarks which is countable for further measurement.

The new internalization theory was developed to better explain subsidiary specific advantages and their reverse diffusion to parent companies (Verbeke and Rugman, 1992). Li and Oh (2016) suggest that 'new internalization theory' focuses on the explanation of FSAs' nature and attributes and their diffusion within member firms. This new internalization theory can provide useful insights into the question of what specific types of strategic assets are sought by EMNEs in foreign markets. Verbeke and Kano (2015:421) has made the 'critical extension' to 'new' internalization theory (vis-à-vis 'conventional' internalization theory), which is its distinction between the different types of FSAs that MNEs may possess, specifically stressing their properties of location-boundedness. Thus, FSA location boundedness became a core focus of 'new' internalization theory (Rugman and Verbeke, 2001; Verbeke and Rugman, 1992). Narula and Verbeke (2015:615) have commented that this distinction implied '*a quantum leap in the development of modern IB research*'. In spite of this, 'new internalization theory' has not been extensively applied into studying EMNEs.

A number of IB studies have revealed that EMNEs tend to acquire advanced technologies or known brands via CBM&As (e.g. Deng, 2009; Luo and Tung, 2007; Rui and Yip, 2008). After deals, intra-MNE diffusion processes may diffuse the FSA. New internalization theory critically refers to the multidimensionality of FSA diffusion. As a result, it would appear appropriate for it to be applied to research on EMNEs. Moreover, in comparison with independent firms, I contend that business group-affiliated EMNEs may seek different properties of strategic assets.

2.2.2 Hypotheses development

Economists regard business groups as functional substitutes for market failures of resource allocation in production (Leff, 1978). Moreover, entrepreneurs use business groups to internalize the market failure addressing the difficulties of achieving capital, talents, technology in emerging economies (Guillen, 2000). Compared with foreign investors and domestic independent firms, business groups in emerging economies may access more country-specific advantages (CSAs) including local resources, labor and capital assets. Hennart (2012:169) has argued that "*most CSAs are not freely available to foreign investors. Many, such as land, natural resources, labor, and distribution assets, are sold in imperfect markets, giving their local owners significant market power. This explains why some EMMs can compete with MNEs and generate the profits needed to acquire the FSAs they lack*." According to Hennart's (2012) arguments, the preferential access to complementary local resources[7] (CLRs) that business group affiliated firms have may facilitate their intangible asset seeking FDI. From this theoretical lens, group affiliation may be transformed into Chinese firms' one special kind of ownership advantage.

With respect to Luo and Tung's (2007) springboard explanation, Chari (2013) suggests both business groups and independent firms have the strategic intent of undertaking FDI in order to maintain their domestic market positions from foreign rivals. It may be argued, however, that business groups can obtain privileged treatment from home country governments in encouraging FDI compared to independent firms due to their dominant positions in the domestic markets (Sachwald, 2001; Gaur, Kumar, and Singh, 2014). "*Compared with a standalone firm, a corporate Business Group-affiliated firm is likely to have an edge in undertaking OFDI. Its effective strength is partly derived from the accessibility to the Group resources, and the economies of scale and scope spanning the Group*" (Singh, 2011:145). Chari (2013), for example, has also shown a positive and significant relationship between Indian firms' business group affiliation and their FDI. The above arguments imply business group affiliation in emerging economies may facilitate SAS related OFDI, a view generally in accord with the EMNE

[7] Hennart (2012:169) defines the preferential access to the subset of country-specific advantages as complementary local resources.

literature (*though not tested*) (Chari, 2013; Sutherland, 2009; Yiu, Bruton and Lu, 2007). However, a further area for consideration relates to the particular *types* (i.e the qualitative nature) of strategic assets that business groups may seek.

2.2.2.1 Business Group Affiliation and NLB (i.e codified technology) SAS in business groups vis a vis stand-alone firms

Compared with independent firms, business groups have more advantages in supporting their OFDI through a process of *linking, leveraging, and learning* (LLL) (Mathews, 2006). Business groups provide group-level resources which are important for developing innovations (Chang, Chung, and Mahood, 2006; Choi, Lee, and Williams, 2011; Hobday and Colpan, 2010; Khanna and Rivkin, 2006; Mahmood and Mitchell, 2004). Existing studies indicate business group affiliation can facilitate member firms' innovativeness by providing them with access to group-level shared resources, including capital, technology, labor and other service (e.g. Carney, Essen, Estrin, and Shapiro, 2017; Mahmood and Mitchell, 2004). Business groups have greater capacities in leveraging accessed resources or acquired assets (Chair, 2013; Yiu, 2011).

In studying the determinants of Chinese OFDI, therefore, it is not surprising that Buckley et al. (2007) claimed three special explanations, one of which was capital market imperfections (and special ownership advantages, and institutional factors) which might influence Chinese OFDI strategies. In particular, they argued that capital market imperfections might allow Chinese firms within special organisational forms (i.e. business groups) to raise finance at below-market rates which could encourage their FDI. As noted above, business groups often develop their own internal capital markets to address imperfect capital markets found in emerging economies (Carney, Essen, Estrin, and Shapiro, 2017; Chang, Chung, and Mahmood, 2006; He, Mao, Rui, and Zha, 2013; Gonenc, Kan, and Karadagli, 2007). Buckley and his colleagues (2007) thus speculated that business group affiliation may effectively subsidise Chinese OFDI.

They argued that Chinese business groups had developed their own internal capital market that supported their FDI strategies. Later research has echoed this argument regarding the impact of group affiliation on capital market constraints, further suggesting such internal markets may support SAS types of OFDI (Yiu, 2011; Chari, 2013). Furthermore, internal financial resources within a business group could be more effectively allocated to member firms to develop innovative opportunities than outside financial investors (Chang, Chung, and Mahmood, 2006).

Furthermore, drawing on Castellacci (2015)'s empirical research, group affiliated firms would efficiently allocate human resources internally within the group if the country had limited human capital. Due to the imperfections in human capital markets, Leff (1978) argued that business group could be seen as one advantageous source. For example, groups might incorporate labor market management institutes such as business schools and head-hunting firms (Khanna and Palepu, 1997). Accordingly, groups can employ and allocate more technical talents into R&D investments. In a study of Korean manufacturing firms from 1994 to 2006, Choi, Yoshikawa, Zahra, and Han (2014) found out that group affiliated firms are in a better position to conduct R&D investment by taking advantages of the benefits of improved institutions than independent firms. The internal human market within the business group may then contribute to R&D activities.

Drawing from the resource-based view of the firm, Amsden and Hikino (1994) have argued that business groups would increasingly internalize the R&D function within the group. They suggested that business groups are more capable of internalizing and exploiting foreign technologies across the entire group. Hence, I may postulate that business groups that have their own R&D center may have a higher inclination to acquire NLB assets from DMNEs and exploit them in the home market. To illustrate using an example, the Geely Group has its own research institute in Hangzhou, China. After it acquired Volvo, it may better exploit and share technologies within the entire group.

Additionally, business groups can provide their member firms a known reputation when information in emerging markets is hard to collect and analyse (Khanna and Palepu, 1997). This group reputation also contributes to the foreign acquisition of technologies as it may alleviate foreign firms' fear of losing their intellectual property (Carney, 2008b). Given that patents are highly codified they are considered to have NLB properties, business group affiliated firms, therefore, are likely to acquire them. Therefore, business groups may have more inclination for seeking technology-based FDI than independent firms, leading to the following three hypotheses:

Hypothesis 1-a: business group affiliated firms have a stronger NLB (i.e. codified technological) strategic asset seeking orientation than non-affiliated firms.

Hypothesis 1-b: business group affiliated firms with internal capital markets are more disposed to seek NLB assets than non-affiliated firms.

Hypothesis 1-c: business group affiliated firms with R&D centers are more likely to seek NLB assets than non-affiliated firms.

2.2.2.2 Business groups and LB SAS (i.e. brand-seeking)

Frey, Ansar, and Wunsch-Vincent (2015:217) have argued that: *"In recent years, firms in emerging economies have been more active users of these markets by licensing or acquiring established global brands. Emerging market multinationals—such as Lenovo buying IBM and Tata Motors buying Range Rover—have purchased Western brands to establish international brand recognition."* IB scholars have suggested that Chinese firms pursue brand seeking FDI (Child and Rodrigues, 2005; Deng, 2009; Luo and Rip, 2008; Luo and Tung, 2007; Mathews, 2006). So does business group affiliation facilitate CMNEs' brand seeking FDI via CBM&As?

To recap, business groups form and develop owing to imperfect markets and institutional voids (Khanna and Palepu, 1997; Carney, 2008a). One such imperfect market identified in the literature are imperfect product markets. According to this view, developing brand names is typically a costly and difficult process in emerging markets. Therefore, once firms in emerging markets have established a brand or trademark, they can sell products more easily than those without any brands or trademarks. In emerging markets, like China, consumer rights are limited and information (concerning, for example, product quality) has historically also been rather limited. Consequently, brands wield tremendous power in emerging markets to a considerable extent. Then through enforcing reputation via high quality standards and product guarantees, business groups can easily develop their own brand value across different sectors.

Rugman and Verbeke (2001) note that 'local reputation' as an FSA is not transferable. For example, most Western trademarks are written using the Roman alphabet. *Pinyin* is the equivalent in Chinese, but it is not generally recognized, rather Chinese *hanzi* (characters) are used and understood by most. This vividly illustrates that if Chinese firms acquire foreign brands/trademarks, they will likely have to adapt them to the Chinese market, so all Chinese customers can recognize them. Thus, it is possible that Chinese business group affiliated firms may be less likely to acquire foreign brands.

Compared with independent firms, business groups typically have additional resources available to them for the purpose of SAS and, as postulated in the first hypothesis, are potentially better able to exploit acquired strategic assets. In the case of brands, however, it is not as clear what the impact of business group affiliation will be. On the one hand, business group affiliation may facilitate successful exploitation of that brand via the use of business group resources that can be used to exploit the brand. On the other hand, however, business groups already possess a strong brand name (at least in their domestic market). However, acquired brand assets may not be well-recognized in the domestic market, and if they are, may simply corrode or undermine the value of the business group's domestic brand identity. Thus it is not quite as clear cut how valuable foreign brands may be for powerful domestic business groups.

Given the tendencies of acquiring brands, one dominant reason is that this may allow EMNEs to 'catch-up' with DMNEs. However, the logic behind this thinking requires further critical appraisal. Some EMNE theories suggest that EMNEs strongly tend to repatriate strategic assets they acquired to the home market for exploitation there (Hennart, 2012; Luo and Tung, 2007; Petersen and Seifert, 2014; Rudy, Miller and Wang, 2016). Then it must be addressed whether location boundedness also becomes a consideration in EMNEs' SAS FDI strategies.

As discussed above, brands may be more strongly bounded by location and considered to be LB-FSAs. Unlike the NLB case, there is relatively less theoretical support to propose a stronger orientation towards LB assets in group-affiliated firms compared with independent firms. Rugman and Verbeke (1992) suggest that LB assets cannot be easily transferred at lower cost for further exploitation in any other new location. In short, the value of acquired LB assets cannot easily be 'leveraged' (using Mathews's (2006) terminology) by EMNEs, especially in the domestic market. Arguably, when the acquirer has reached a certain level of FSAs, including the capacity to absorb and exploit the LB assets in their local market, then the value of LB assets may be largely and likely realized. And the expecting level of FSAs in EMNEs is more likely found among business group-affiliated firms.

But, this is certainly not to say that LB assets could not attract EMNEs. From another perspective, LB assets could still be very attractive for EMNEs including CMNEs if they are actively pursuing expansion of foreign markets and for which FSA transferability is not an issue. For instance, CMNEs could develop more factual values in the target markets by acquiring local reputation and the associated local distribution networks in the developed countries. Given the lack of known brands and recognition in developed markets, successful Chinese manufacturers may find an effective way to directly expand in these markets by acquiring a foreign brand. In comparison with exporting unbranded products, direct acquisition of a foreign brand can assist EMNEs to better extract the great value via vertical integration within the value chain. As noted above, it is likely the reason that many IB scholars support the notion that EMNEs are also largely pursuing brand-seeking FDI. Nonetheless, there are somewhat two competing forces in play. If SAS FDI is motivated by the acquisition of foreign intangibles primarily for domestic market exploitation (i.e. following Hennart's (2012) bundling model), I might expect brand seeking FDI to be less common among business groups. On the other hand, if brand-seeking FDI is motivated by consideration of international expansion, CMNEs are truly expecting to use foreign acquisitions to expand internationally.

Business groups can provide their member firms a known reputation when information in emerging markets is hard to collect and analyse (Khanna and Palepu, 1997). Therefore, established brands in emerging markets have remarkable power and then business groups with a reputation are more easily to expand new markets (Carney, 2008b; Khanna and Palepu, 1997). As discussed previously, I may still postulate that Chinese business groups are less likely to acquire a foreign brand to expand domestic markets. As opposed to repatriation of such assets, I would expect there may not be a stronger propensity in business groups vis a vis independent firms in the Chinese context.

In addition, almost all relevant EMNE literature on SAS denote strategic assets in the same general category. For example, strategic assets simply refer to critical capabilities such as R&D capacity, advanced technology, known brands and reputation and marketing resources that strengthen firms' competitive position (Amit and Schoemaker, 1993; Teece, 1997). Accordingly, testing LB assets seeking FDI hypotheses may provide more potential insights into current theorizing regarding CMNEs' FDI strategies.

Consequently, another hypothesis can be established:

Hypothesis 2: Chinese business group affiliated firms have a weaker strategic-asset-seeking orientation towards LB assets (i.e. foreign brands) than non-affiliated firms.

2.3 Methodologies

There are generally two ways that have been used to develop empirical research of CMNEs' OFDI: one way is to investigate China's OFDI activities by using aggregate-level FDI data; the other way is to look at firm-level OFDI activities. Amighini et al. (2014) and others (Sutherland and Anderson, 2015) have shown that empirical research on China's OFDI is compromised by the unreliability of using aggregate data. Aggregate FDI data largely ignores relevant features including details of industry composition, ownership structure and the modes of foreign entry. Indeed, FDI data in general has been seen as a biased measure of MNE subsidiary activity (Beugelsdijk, Hennart, Slangen, and Smeets, 2010). Ning and Sutherland (2011) have found that aggregate FDI data largely ignores the issue of 'round-tripping' and 'onward-journeying' investment, which is highly important for understanding the true determinants of CMNEs' OFDI.

Previous studies on Chinese firms' outbound FDI projects mainly selected listed firms (Sutherland and Ning, 2011; Yang, Yang, Chen and Allen, 2014). However, my study focused on both listed, delisted and unlisted firms that had completed cross-border M&A deals. Yang, Yang, Chen and Allen (2014) exclude FDI projects in tax havens and offshore financial centres (THOFCs) as they believe those entities are simply investment holding companies. In fact, using the Orbis database, I found that some target firms located in THOFCs also own some patents and trademarks. Subsequently, achieving firm-level evidence is critically important to understand the true determinants of CMNEs' SAS FDI behaviours.

According to recent news by CGTN[8], "*M&A is the major approach of overseas investment for Chinese enterprises; about 88 percent of over 2,858 agreements by Chinese companies overseas were completed via M&A between 2000 and 2016 [Center for China and Globalization]*" (Nian, 2017).

A lot of existing studies have shown that CMNEs seek strategic assets to alleviate their own competitive disadvantages (e.g. Agyenim et al. 2008; Deng, 2004, 2009; Luo and Tung, 2007; Peng, 2012; Zheng et al. 2016). This research may contribute to extant literature on CMNEs' SAS FDI. Secondly, the mode of greenfield is relatively time consuming for a firm to achieve foreign advanced technologies or brands. Thirdly, in terms of data collection, Thomson One Banker (TOB) may allow us to access to Chinese firms' firm-level CBM&As, while it is somewhat difficult to achieve Chinese firms' detailed greenfield investment activities.

For this study I used the firm-level approach to exploring CMNEs' SAS orientation (i.e. patent seeking and trademark seeking).

CBM&As has been seen as a faster mode of market entry for EMNEs, including CMNEs (Deng, 2009; Luo and Tung, 2007) to expand their international product and consumer markets (Chen and Findlay, 2003; Deng, 2007, 2009; Wang and Boateng, 2007), and in particular to acquire strategic assets in international markets (Agyenim, Wang and Yang, 2008). Further, Deng and Yang (2015) show that most OFDI from emerging countries has been embodied in CBM&As.

Therefore, I mainly used CMNEs' CBM&As as the research sample, exploring the influence of business group affiliation on specific SAS activities.

8 CGTN refers to China Global Television Network, which is owned by China Central Television or Government of the People's Republic of China.

The data for this study was mainly taken from two different sources, including the TOB and the Orbis Database. TOB provides data on the cross-border M&A deals that have been completed by CMNEs in the period between 2006 and 2015. Orbis database provided by Bureau van Dijk, covers 200 million companies around the world (Bureau van Dijk, 2016).Then I obtained the supplementary firm-level details about both acquirers and target firms from the Orbis database. I arrived at the final sample in the following four main stages.

2.3.1 Data collection

In the first stage, I collected the data on CMNEs' CBM&As via TOB database. I needed to ensure that all target firms are located outside of Mainland China. All Chinese acquirers had to be firms originating in Mainland China. In this case, I ensured that the acquirer's ultimate parent nation was in China. According to the standard OECD/IMF definition of FDI, I placed one condition for each acceptable M&A deal that the percentage, namely the value of the shareholdings after transaction stood between 10 to 100% of total. In other words, Chinese acquirers owned more than 10% ownership of target firms. In this stage, I found 1,736 such deals between 2006 and 2015 in the TOB database.

In the second stage, I obtained the Chinese acquirers' firm-level information. Numerous challenges were encountered when collecting data about brand or trademark acquisitions, as these acquisitions are not made alone and become one part of an M&A deal (Frey, Ansar, and Wunsch-Vincent, 2015). However, the firm-level data from databases like Orbis have the advantage of providing considerable details about the target (and acquiring) firm's intellectual property information, including both patents and trademarks. Using the Orbis database allows us to collect firm-level information, including target firms' number of both patents and trademarks, acquirers' date of registration, firms' sizes (i.e. number of employees), age, profitability (i.e. return on assets, profit margin), total assets as well as details on the size of the groups to which they belong. Firstly, having isolated target and acquiring firms from TOB, I used the 'batch-search' function in Orbis to match each pair of firms. After this, I manually checked each firm's details. For example, I discarded some target firms that were actually representing single locations and some of them that were originally Chinese firms, which amounted to 255 ineffective target companies in total. I further abandoned some target firms that are originally other Chinese foreign-based subsidiaries, which are not relevant for our research purpose. Furthermore, there were 25 repetitive M&A deals that were excluded. Another 89 target firms were simply part assets such as wind farms, oil, gold projects for which I cannot find any actual company registration information. I also found five ineffective target observations for which there no details were found in the Orbis database.

In the third stage, I started to check acquirers. Firstly, I excluded 136 Chinese acquirers which had been dissolved, according to the information given by Orbis. Secondly, checking acquirers' global ultimate ownership (GUO), I found 26 acquirers are not indigenous Chinese firms. Thirdly, I excluded another 92 Chinese acquirers because they consisted of individual investors. Finally, I double-checked the remaining data sample, leaving finally 843 effective Chinese CBM&As involving 486 Chinese acquirers.

2.3.2 Variables

The notion of a strategic asset is somewhat broad and has been measured using different proxies in different studies. Both technology and brand seeking have been considered as vital elements of firms' SAS FDI in the conceptual literature (Child and Rodrigues, 2005; Luo and Rip, 2008; Luo and Tung, 2007; Mathews, 2006). For instance, Child and Rodrigues (2005) suggest that one important motivational factor for China's OFDI is to acquire technological and brand assets. Also, Luo and Tung (2007:485) state that:

> *"Springboard links a firm's international expansion with its home base. For instance, EM MNEs (such as China's TCL, Lenovo, Chunlan, ZTE, and Haier) have reorganized their home supply or production bases to meet their increased global sales for high-end products, or have re-branded their homemade products after using foreign acquirees' technologies and trademarks."*

As noted above, the novelty of this study is that it uses specific measures of target firms' strategic assets (i.e. patents and brands). Most empirical studies to date have used country level proxies (i.e. Buckley et al. 2007; De Beule and Duanmu, 2012; Li, Li, and Shapiro, 2012; Ramasamy, Yeung, and Laforet, 2012). Another innovative approach here, as noted, is the division of the SAS proxy into two types: NLB assets (i.e. patents) and LB assets (i.e. trademarks). Below, I specifically discuss all relevant variables in the models.

2.3.2.1 Dependent variables

Strategic assets have been defined as '*know-how, technologies, brands, equipment, buildings, and sites acquired or leased abroad with the aim of creating or extending advantages in the future, or in businesses and territories other than where the assets are currently employed and exploited*' (Petersen and Seifert, 2014:381).Such assets, as this definition implies, are largely akin to the broad conceptualization of FSAs, which are critically important for firms' sustainable competitiveness. A great number of IB scholars have specifically treated patents as one SAS proxy for studying CMNEs' OFDI (Anderson and Sutherland, 2015; Anderson, Sutherland, and Severe, 2015; Buckely et al. 2007; Chari and Acikgoz, 2016; De Deule and Duanmu, 2012; Deng and Yang, 2015; Drogendijk and Blomkvist, 2013; Ramasamy, Yeung, and Laforet, 2012; Zhao, 2009). However, little or no empirical research has tried to provide the empirical evidence of patent seeking activities in the target firm itself. Table 2.3.2.1 below specifically displays the most current empirical research on Chinese OFDI.

There are two main issues. Firstly, aggregate FDI data has been tested to be a biased measure of MNE subsidiary activity (e.g. Beugelsdijk, Hennart, Slangen, and Smeets, 2010; Sutherland and Anderson, 2014). All firm-level empirical research of Chinese OFDI (displayed in Table 2.3.2.1) have demonstrated the positive result of SAS (e.g. Anderson and Sutherland, 2015; Cui, Meyer and Hu, 2014; De Beule and Duanmu, 2012; Li, Li, and Shapiro, 2012; Ramasamy, Yeung, and Laforet, 2012; Yang, Yang, Chen, and Allen, 2014). On the other hand, using aggregate FDI data bring us negative result of CMNEs' SAS (Buckley et al. 2007; Drogendijk and Blomkvist, 2013). Therefore, the use of firm-level data can better assist us in finding out the real determinants of Chinese OFDI. The second issue lies in the measurement of strategic assets. Alon (2010:11) argues that '*there is no theoretically established variable best suited to capture strategic-asset-seeking FDI*'. Thus, existing empirical research cannot reach a consensus on CMNEs' SAS FDI. For example, the IB scholars listed in Table 2.3.2.1 selected various SAS proxy, but neglected trademarks (or brands) in defining a SAS proxy except for De Beule and Duanmu (2012). However, their study still added the data on trademarks at a country level rather than a firm level. In short, no empirical research so far has tried to use either firm-level patent or trademark as a SAS proxy. One plausible explanation maybe attributed to the difficulties of collecting firm-level patent or trademark information.

In this study I employ the target firm's total patent count and number of trademarks (taken from Oribis) to proxy the NLB and LB assets respectively.

I cannot neglect that using the trademark counts has several possible limitations. First of all, some brands acquired may already be recognized in the acquiring firms' domestic market (i.e. their reputation has spread across their home market, giving them NLB properties as well. However, this study focused on CMNEs' brand seeking FDI. Despite target firms' brand reputation, foreign trademarks cannot be widely recognized by the

Chinese market because China is not an English-speaking country. As Pang (2017) suggests, "*English is almost universally accepted as the language of international business, but domestic Chinese consumers will typically look for Chinese characters and colors before looking at the English version of a brand name. Therefore, a brand's name in Chinese and its trade dress is critically important to not only the perception of the brand in China but also what effect its branding and marketing will have in helping it to succeed in China.*"

The second limitation of using trademark count is that it cannot represent trademark value. Extensive information on target firms' brand value is not widely available. For example, according to a recent article in the Guardian, Monaghan (2017) reported that when Shanghai-based Bright Food bought Weetabix[9], the world famous brands, especially in UK market, it had expected the cereal would become widely recognized in China and accepted by Chinese customers as part of a general trend towards more western eating habits. But the market share has disappointed so that China's Bright Food sold Weetabix to the US Company Post Holdings (Monaghan, 2017). More or less, Weetabix will likely be recognized by more Chinese customers in future, but indeed it indeed needs time and unexpected marketing investment.

However, an important focus of my study is exploring comparative location boundedness (i.e. comparative study on the distinction between NLB and LB assets seeking FDI). I believe that it is the comparative distinction between NLB and LB proxies, that is of great significance. There are also good reasons for supposing trademarks are more location bounded than patents.

Based on the above discussion, I measured strategic assets by using the number of patents (*TNPAT*) and trademarks (*TNTRADM*) that target firms have registered and owned as dependent variables at the time of their acquisition (i.e. negative binomial

[9] The Weetabix portfolio includes Alpen, the no.1 muesli brand in the UK, Ready Brek, Barbara's and Weetos (Monaghan, 2017).

modelling). Furthermore, to further investigate the likelihoods of CMNEs' specific type of SAS activities, I additionally built two dummy variables for patent seeking and trademark seeking activities respectively as dependent variables (i.e. logit modelling). If the target firm had at least one patent or one trademark, then I measured this variable as 1, and 0 otherwise. Overall, this firm-level study can allow us to find out the determinants of CMNEs' specific SAS FDI.

Table 2.3.2.1 Summary of empirical studies on Chinese OFDI exploring the strategic asset seeking activities 1

Authors and year of Study	Theoretical perspective	Time period and Number of observations	SAS proxy in the host countries	Dependent variables	Evidence of strategic asset seeking?
Alon, 2010	Institutional perspectives	Firm level, 800 Chinese firms investing in 103 countries between 2003 and 2007	R&D spending	Aggregate Chinese OFDI; Sector level OFDI	Yes; but only occurs in state sector
Anderson and Sutherland, 2015	Entry modes and strategic asset seeking	Firm-level; 380 greenfield deals and 160 acquisition deals from 2003 to 2011	Three-way linear additive composite of (1) state share of US Fortune 500 companies; (2)Masters of Business Degrees Awarded; (3)national utility patents registered	Frequency count of Chinese FDI projects in the host state	Yes; Acquisitions are the primary mode of strategic asset seeking for Chinese firms' OFDI in US
Buckley et al. 2007	Capital market imperfections, special ownership advantages and institutional factors	Aggregate level; approved OFDI data between 1984 and 2001	Annual patent registration in host country	Annual outfolow of Chinese FDI	NO; no significant result for strategic asset seeking
Cui, Meyer, and Hu, 2014	Awareness-motivation-capability (AMC) framework of competitive dynamics	Firm-level; 154 Chinese firms	foreign technology, brand asses, managerial know-how, global business information	12 items of measuring firms' SAS, market seeking, and efficiency seeking intents of FDI	Yes; foreign competition, governance structure and relevant financial and managerial capabilities are relevant about chinese firms' SAS intent
De Beule and Duanmu, 2012	Market seeking, natural resource , strategic asset seeking	Firm level; 121 acquisitions by chinese firms and 531 acquisitions by Indian firms	number of patents and trademarks registrations in the host countries	Dummy variable (1=the host country receives a MA entry from china, 0 otherwise; 1=the host country receives a MA entry from India, 0 otherwise	Yes; chinese acquisitions are more likely to take place in countries with higher-level technological assets; no positive and significant results about trademark seeking in high-level manufacturing sector and mining industry
Drogendijk and Blomkvist, 2013	Cultural distance	Aggregate level; Chinese firms' OFDI in 174 countries between 2003 and 2009	The number of patents registered in the host countries	Chinese firms' OFDI in 174 countries	No significant result
Li, Li, and Shapiro, 2012	Knowledge seeking firm ownership	Firm-level; 410 Chinese firms between 1990 and 2009	The number of industry-specific patent information in host country	Hazard of investment firm's propensity to invest in a country in a given year	Yes; Chinese firms had a greater propensity to invest in countries with technology advantages
Ramasamy, Yeung, and Laforet, 2012	Location choice and firm ownership	Firm level; 63 Chinese listed companies 2006 and 2008	number of registered patents in host countries and the proportion of technology exports to total exports of the host countries	the number of Chinese investment projects in host countries	Yes; all firms have strategic intent; the attractiion is commercially viable technology rather than core research content (i.e. patents)
Yang, Yang, Chen, Allen, 2014	Traditional FDI vs SAS FDI	Firm level; 191 FDI projects in 2008 with 100 A-share Chinese listed companies	the motivations are to seek or acquire technology, marketing and management extertise	dummy variable (SAS FDI was coded as 1)	Yes; industry openness and increased absorptive capacity make chinese firms more likely to engage in SAS FDI

2.3.2.2 Main independent variable

Following prior research, I measured business group affiliation (*BGA*) using an indicator variable with value '1' to indicate if the firm is affiliated to a business group, and 0 otherwise (Buckley, Munjal, Enderwick, and Forsans, 2016; Chari, 2013; Chittoor, Kale, and Puranam, 2015; Kim and Lui, 2015; Ma, Yao, Xi, 2006; Ramaswamy, Li and Petitt, 2005; Wang, Yi, Kafouros, and Yan, 2015). I mainly followed four stages to check and confirm Chinese acquirers' business group affiliation.

Firstly, in 1998, the State Administration for Industry & Commerce of the People's Republic of China launched the '*Interim Provisions on the Administration of Enterprise Group Registration*' (Enterprise Registration Bureau, 2017). According to this business law, one first condition that an enterprise group should meet refers to the parent company of an enterprise group has a registered capital of £5 Million[10] and at least five subsidiaries. Then I identified each firm's business group affiliation according to the information provided by the Orbis database about the number of companies in a corporate group. However, some acquirers' information in Orbis is so severely curtailed, that I had to find other viable approaches to identify their business group affiliation. Prior studies also identified a firm's group affiliation through checking whether its ultimate controlling entity had more than one firm in that year (He, Mao, Rui and Zha, 2013). Following the He et al.' (2013) approach, I checked each acquirer's global ultimate owners in Orbis database and searched their group-affiliated information.

Thirdly, following previous studies (Lu and Ma, 2008; Xia, Ma, Lu, and Yiu, 2014), I identified enterprise group information from various editions of '*Large Corporations of China'*; a list from the State-Owned Assets Supervision and Administration Commission of the State Council (SASAC). The definition of those business groups listed in '*Large Corporations of China'* is also according to "*Enterprise Group*

[10] The exchange rate was calculated as 1 pound to 10 RMB

Registration Management Interim Provisions".

Fourthly, I double-checked this measure of business group affiliation by using further related secondary sources (such as corporate websites, media reports, company annual reports reported in Chinese).

2.3.2.3 Other control variables

As for the firm-level factors, Deng (2012:413) mentions that:

> *"Firm-level antecedents of the ICF [international of Chinese firms] are the focus of scholarly work using one basic strategic assumption. Scholars assume that Chinese firms choose to engage in international activity to enhance the value or competitiveness of the firm, and that these choices depend largely upon firm-specific factors such as company size, ownership, export intensity and international experience."*

To explore the true determinants of CMNEs' specific SAS orientation, this study included three levels of controlling factors: firm level, industry level and country level. Table 2.3.2.2 displays all variables' descriptions including measurement methods, data sources and expected relationship with dependent variables. Following Yang et al.'s (2014) empirical research, I considered the influence of government ownership in determining CMNEs' SAS FDI behaviours. I used an indicator variable (*STATE*) with value 1 if the acquirer is mainly owned by the Chinese government, and 0 if otherwise. Yang et al. focused on Chinese firms that were listed either on the Shanghai or Shenzhen Stock Markets, while my study expanded its research sample to all listed, delisted, and unlisted firms. The data sample in this study, therefore, is about all Chinese firms that had done M&A deals between 2006 and 2015. Also, it was difficult to measure ownership control in this study by using the percentage of state ownership as Yang et al. did. Chinese stated-owned enterprises (SOEs) have more privileged support from the Chinese government (Buckley et al., 2007; Child and Rodrigues, 2005), including financial and policy support. Such government support may facilitate Chinese firms' more risky SAS FDI (Ramasamy et al. 2012). In spite of that, similar prior studies about exploring determinants of EMNEs' OFDI somewhat neglect the influence of state ownership on specific types of SAS FDI (e.g. Chair, 2013; Buckley, Munjal, Enderwick, and Forsans, 2016).

Yang et al. (2014) used intangible asset quantity and R&D capability to measure firms' absorptive capacity. Following their research, I also added the two factors, but using different proxies. Accordingly, the logarithm-transformed number of patents (*LANPAT*) and trademarks (*LANTRADM*) were used to measure acquirers' absorptive capacities and domestic market positions respectively. For instance, if one Chinese MNE has many known domestic brands and it still tends to acquire foreign brands, one better explanation is that this company wants to both strengthen domestic market positions and expand its reach into foreign markets.

Moreover, firms may accumulate technological resources by establishing the own R&D centres (Martin and Salomon, 2003). Technological resources also represent firms' absorptive capacity (Buckley, Munjal, Enderwick, and Forsans, 2016). As discussed above, business groups have more resources to build the own R&D centres. I constructed a dummy variable to measure group-affiliated firms' R&D centre (BG_RD), which was coded '1' if the business group to which acquirers were affiliated had its own R&D centres, and '0' if otherwise. Moreover, existing research also uses internal financial resources to study its importance on SAS FDI (Buckley, Munjal, Enderwick, and Forsans, 2016; Cui, Meyer and Hu, 2014). Likewise, the internal capital market variable (*BG_FIN*) was also simply applied. I coded '1' if the business group affiliates were involved in a financial industry, and '0' if otherwise.

In general, firm heterogeneity is controlled by the age and size of the firm. The firm's age (*LAGE*) is based on total years since its incorporation and is also log-transformed

(Buckley et al. 2016; Cui et al. 2014). A firm's age may determine its FDI decision as it largely brings to the accumulation of knowledge and experience (Wong, Hong, Kafouros, and Boateng, 2012). Longer established firms have a greater propensity to engage in SAS FDI than traditional FDI (Cui, Meyer and Hu, 2014; Xia, Ma, Lu, and Yiu, 2014; Yang et al. 2014). I expected that established Chinese firms are more likely to undertake sophisticated patents or trademarks seeking activities. Following Cui et al. (2014)'s approach, firms' total assets in US dollars (*LTASSET*) was also log-transformed to measure acquirers' firm size in our study. In terms of financial performance, Yang et al. (2014) suggest that better performing firms have a higher likelihood of engaging in relatively long-term investment, potentially including the SAS FDI. Hence, acquirers' profit margin (*PROFIT*) was further employed as one control variable.

Prior research also use an indicator variable to measure whether a firm is listed in a stock exchange and under market scrutiny or not (Chittoor, Kale, and Puranam, 2015). I expected to know whether Chinese firms choose to go public or not before their M&A deals. Public status (PUBLIC), as a control variable, was measured as a dummy variable whereby '1' means the acquirer is listed, and '0' if otherwise. If firms had been listed in a stock market, they would be more capable of raising funds to support SAS FDI activities. This study also used the ownership level of acquirers after M&A deals (*OWNTRANS*) as one of control variables, exploring whether there are some difference about acquirers' ownership level in between patent seeking and trademark seeking activities.

Furthermore, foreign experience has also been employed as one control variable to study its importance on firms' SAS FDI behaviors (Buckley et al. 2016; Cui, Meyer and Hu, 2014; Yang et al. 2014). This study measured firms' foreign experience (*FEXPE*) as a dummy variable with the value '1' meaning Chinese acquirers have established one foreign subsidiary at least before acquiring a foreign company, and '0' if otherwise. The Orbis database enables us to achieve Chinese acquirers' foreign subsidiary information with respect to their location and date of registration. If acquirers had already built subsidiaries in the foreign markets, they would have accumulated knowledge or resources and would be less likely to seek foreign patents or trademarks.

In terms of industry types, I followed Jones and Temouri (2016)'s approach in classifying two-digit NACE industry codes into high technology (*HITECH*), medium technology (*MEDTEC*) and low technology (*LOWTEC*) manufacturing industries, knowledge intensive (*KNINTEN*) and less knowledge intensive (*LEKNIN*) service industries (as shown in table 2.3.2.2). Yang et al. (2014) argue that industry factors might lead to EMNEs' distinct SAS FDI behaviors.

Lastly, I controlled for time heterogeneity by including year dummies for each year in which CMNEs' foreign M&A deals completed. Buckley et al. (2016:991) highlight the necessity of adding time control: "*(1) the acquisitions are on a rising trend; and (2) various changes that occurred over time may have impacted the firm's acquisition capabilities.*"

Table 2.3.2.2 Variable descriptions 2

Variable name	**Measurement**	**Data source**	**Expected sign**
Dependent variables			
TNPAT	Number of target firm's patents	ORBIS Database	+
TNTRADM	Number of target firm's trademarks	ORBIS Database	+
T_PAT	1 means the target has 1 patent at least, 0 otherwise	ORBIS Database	+
T_TRADE	1 means the target has 1 trademark at least; 0 otherwise	ORBIS Database	-
LANPAT	log(1+Acquirers' number of patents)	ORBIS Database	+
LANTRADM	log(1+acquirer's number of trademarks)	ORBIS Database	-
Independent variables			
BGA	1 means the firm is affiliated to a business group, 0 otherwise	large Corporations of China 2008; China National	+

		Knowledge Infrastructure (CNKI); ORBIS Database; Corporate websites	
STATE	1 means the firm is a state-owned, 0 otherwise	ORBIS Database; Corporate websites	-
BG_FIN	1 means the group affiliated firm has its own financial centre or it is involved in a financial business, 0 otherwise	ORBIS Database; Corporate websites	+
BG_RD	1 means the group affiliated firm has its own R&D centre, 0 otherwise	ORBIS Database; Corporate websites	+
LAGE	log(Firm's age)	ORBIS Database	-
PROFIT	Profit margin%	ORBIS Database	+
LTASSET	log(Total assets)	ORBIS Database	+
PUBLIC	1 means the firm is a listed, 0 otherwise	ORBIS Database	+
OWNTRANS	its ownership level % after M&As transaction	Thomson One Database	+
DEVOPED	1 means the target firm is located in a developed country, and 0 otherwise	ORBIS Database; UNCTAD statistics	+
FEXPE	1 means the firm has one foreign subsidiary at least representing its foreign experience, 0 otherwise	ORBIS Database	+
INDRELATE	1 means the acquirer is involved in an industry which is mostly related to the target firm (the same two digit NACE coes), 0 otherwise	ORBIS Database	+
NACE codes	Industry classifications	ORBIS Database	.
HITECH	Dummy variable where manufacturing firms included in NACE 2-digit codes: 21 and 26 =1 and 0 otherwise	ORBIS Database	+
MEDTEC	Dummy variable where manufacturing firms included in NACE 2-digit codes:19; 20; 22; 23; 24; 25; 27; 28; 29; 30 and 33	ORBIS Database	+

	=1 and 0 otherwise		
LOWTEC	Dummy variable where manufacturing firms included in NACE 2-digit codes: 10; 11; 12; 13; 14; 15; 16; 17; 18; 31 and 32 =1 and 0 otherwise	ORBIS Database	+
KNINTEN	Dummy variable where manufacturing firms included in NACE 2-digit codes: 50; 51; 58; 59; 60; 61; 62; 63; 64; 65; 66; 69; 70; 71; 72; 73; 74; 75; 78; 80; 84; 85; 86; 87; 88; 89; 90; 91; 92 and 93 =1 and 0 otherwise	ORBIS Database	-
LEKNIN	Dummy variable where manufacturing firms included in NACE 2-digit codes: 45; 46; 47; 49; 52; 53; 55; 56; 68; 77; 79; 81; 82; 94; 95; 96; 97; 98 and 99 =1 and 0 otherwise	ORBIS Database	-

2.3.3 Research models

As noted above, I obtained 843 effective CBM&As dating from between 2006 and 2015 by 486 Chinese acquirers. In this study a pooled data set was mainly used for three main reasons.

First and foremost, acquisition is not a regular activity for the most of firms, although I found a few Chinese firms had acquired foreign companies several times in the same year. The average number of foreign acquisition deals by Chinese firms is about 1.73 (843 deals by 486 Chinese firms) over a ten-year period. Thus, there is dispersion in the data. As Buckley et al. (2016) suggest, such data is not best captured by employing panel data estimation models, but the pooled ordinary least square (POLS). Panel data estimation procedures generally assume there are cross-sectional and timer series relationships embedded in the data. My data does not fit this description well. Moreover, I was simply interested in whether the acquired firms had any patents or trademarks. It is relatively unnecessary to observe from a longitudinal perspective. Secondly, given the relative stability in the variance across time in the business group affiliation, I selected cross-sectional data set instead of a longitudinal panel study. Thirdly, I focused on both SOEs and POEs, regardless of their public status. Admittedly, it was also difficult to achieve extensive information about both of them from 2006 to 2015, especially for unlisted ones.

As for dependent variables, target firms' patents and trademark counts likely include a number of zeros, meaning firms do not have any patents or trademarks. Then, it may discount the prediction of whether business group affiliation determine CMNEs' patent seeking and trademark seeking FDI strategy. To test the business group affiliation on the likelihood of patent and trademark seeking FDI activities, I ran the *probit* regression model. Thus, models for testing the likelihood of patent seeking and trademark seeking are illustrated as follows:

The probability of engaging in patent seeking or trademark seeking == $\frac{1}{\{1+exp^{-Y}\}}$

Where

$$\gamma(T\_PAT_{it}/T\_TRADM_{it}) = \beta_0 + \beta_1 \times BGA_{i,t-1} + \beta_2 \times BG\_FIN_{i,t-1} + \beta_3 \times BG\_RD_{i,t-1} + \beta_4 \times STATE_{i,t-1} + \beta_5 \times LAGE_{i,t-1} + \beta_6 \times PROFIT_{i,t-1} + \beta_7 \times LTASSET_{i,t-1} + \beta_8 \times LANPAT_{i,t-1} + \beta_9 \times LANTRADM_{i,t-1} + \beta_{10} \times FEXPE_{i,t-1} + \beta_{11} \times PUBLIC_{i,t-1} + \beta_{12} \times OWNTRANS_{i,t-1} + \beta_{13} \times HITECH_{i,t-1} + \beta_{14} \times MEDTEC_{i,t-1} + \beta_{15} \times LOWTEC_{i,t-1} + \beta_{16} \times KNINTEN_{i,t-1} + \beta_{17} \times LEKNIN_{i,t-1} + \varepsilon$$

T_PAT_{it} and T_RADM_{it} represent the target firm i in year t has at least one patent and trademark. $BGA_{i,t-1}$ in both models is the main independent variable referring to that 1 means the target firm i is affiliated to a business group, and 0 otherwise. Particularly, all explanatory variables are mostly relevant to Chinese acquirers' attributes and strategic choices, while dependent variables are simply about target firms' patent and trademark information.

The number of patents or trademarks was both a count and discrete variable, which ranges from zero to a certain positive number. Since it is non-negative, standard multiple regression models or POLS mentioned above are not appropriate. A count data can be modelled as a Poisson or Negative binomial regression model. The Poisson model assumes that the number of acquisition deals happen at certain rate in a period of time that cannot effectively deal with the overdispersion. Therefore, I regarded the negative binomial regression model as a better choice. Following Greene's (2003) suggestion, I also applied the Vuong test (Vuong, 1989) and then made the final choice. Since the Vuong Z-scores were insignificant, I finally adopted the negative binomial models. Also, I followed prior studies (Buckley et al., 2016; Deng and Yang, 2015) to run the negative binomial regression models with respect to the tests for the amounts of patents and trademarks. The model equations are explained below:

$$TNTPAT_{it}/TNTRADM_{it} = \beta_0 + \beta_1 \times BGA_{i,t-1} + \beta_2 \times BG\_FIN_{i,t-1} + \beta_3 \times BG\_RD_{i,t-1} + \beta_4 \times STATE_{i,t-1} + \beta_5 \times LAGE_{i,t-1} + \beta_6 \times PROFIT_{i,t-1} + \beta_7 \times LTASSET_{i,t-1} + \beta_8 \times LANPAT_{i,t-1} + \beta_9 \times LANTRADM_{i,t-1} + \beta_{10} \times FEXPE_{i,t-1} + \beta_{11} \times PUBLIC_{i,t-1} + \beta_{12} \times OWNTRANS_{i,t-1} + \beta_{13} \times HITECH_{i,t-1} + \beta_{14} \times MEDTEC_{i,t-1} + \beta_{15} \times LOWTEC_{i,t-1} + \beta_{16} \times KNINTEN_{i,t-1} + \beta_{17} \times LEKNIN_{i,t-1} + \varepsilon$$

$TNTPAT_{it}$ and $TNTRADM_{it}$ represent the number of patents and trademarks respectively that the target firm i has in year t.

2.3.4 Estimations

As for estimations, I firstly consider the existence of heteroscedasticity because the statistical tests of significance may be biased resulting in invalid variance estimation (Goldberger, 1964). The Breusch-Pagan test was applied to identify the problem of heteroscedasticity in a linear regression (Breusch and Pagan, 1979). The BP test result was significant meaning the heteroscedasticity occurred. Then I added the robust standard error analysis in estimations. Furthermore, multicollinearity was also tested in the whole process of estimations. Stata contains a "post-regression" command called "vif" (variance inflation factor) that can be utilized to detect multicollinearity. To calculate the VIF factor for $\widehat{\beta_i}$, the following formula can be used:

$$VIF = \frac{1}{1 - R_i^2}$$

To generalize, a rule of thumb is that if VIF $(\widehat{\beta_i}) > 10$, then multicollinearity is high (Kutner, Nachtsheim, and Neter, 2004).

Last but not least, the endogeneity problem was addressed, since it has been widely recognized as an important issue in strategic management research (e.g. Brouthers, Brouthers, and Werner, 2003; Chang, Chung, and Moon, 2013). He, Zhang and Wang (2015) argue that firm's strategic choice is non-random or even self-selected which may be dependent on its organizational attributes that are hard to measure. If the endogeneity issue is neglected, it would result in biased parameter estimations (Hult, Ketchen, et al. 2008). Firms' foreign market seeking can be seen as an endogenous decision due to certain firm characteristics (He, Zhang, and Wang, 2015; Hult, Ketchen, et al. 2008). In this study, EMNEs tend to choose developed markets for SAS FDI (e.g. Deng, 2009; Luo and Tung, 2007; Rui and Yip, 2008). Based on UNCTAD's country classification, I classified whether the target country is located in a developed country or developing country. Thus, I added one more control variable '*DEVEOPED*' (seen in Table 2.3.2.2), indicating that value '1' means CMNEs tend to developed markets for SAS FDI and '0' if otherwise. And it was treated as the key endogenous variable. Following that, I specifically introduced two instrument variables: the target country's Gross Domestic Product (GDP) and International Property Rights Index (IPRI) respectively. Next, I tested whether these two instrumental variables are not significantly correlated with dependent variables. As for dependent variables (*T_PAT* and *T_TRADM*), I ran an *Instrument-variable (IV)probit* model to estimate the data.

Moreover, as I explored the main influence of business group affiliation on CMNEs' SAS FDI, the potential selection bias has to be dealt with. Otherwise, it may also result in the endogeneity problem. For example, the group-affiliation sample may be selected based on some unobservable factors that potentially affect firms' strategies (He, Mao, Rui, and Zha, 2013). Thus, I used the Heckman's (1979) two-stage method to deal with the self-selection bias. In the first stage, I estimated a probit model of business group affiliation on a group of variables that determine a firm's group affiliation choice. Then I added the Lambda based on the probit estimate in the previous regression specifications, controlling potential self-section bias.

Lastly, to better avoid possible endogeneity with the dependent variable in the model, I followed previous studies (i.e. Deng and Yang, 2015) and lagged all independent variables by one year. For example, I measured Chinese acquirers' absorptive capacity by using the number of patents that they already had prior to any M&A deals.

2.3.5 Robustness checks

Following He et al. (2013), I considered the heterogeneity element within business groups for one lens of robustness tests. As discussed previously, business groups in emerging economies likely have an internal capital market or an R&D center. Therefore, after further considering these business group characteristics, I firstly examined the robustness of modelling results. Secondly, I split the full sample to two subsamples based on firms' ownership type (such as SOEs and POEs), comparing the coefficients between these subsamples after estimations. Thirdly, as for testing the amounts of patents and trademarks, I further added the IV Two-State Least Squares (2SLS) regression model for robustness tests. For the purpose of solving the overdispersion problem, the IV_GMM regression model was specifically selected. Given the presence of heteroscedasticity, GMM estimation would be more efficient than standard IV regression (Baum, Schaffer, and Stillman, 2003).

2.4 Research findings

2.4.1 Descriptive statistics

Table 2.4.1.1 presents the descriptive statistics and pairwise correlation matrix for all variables in this study. Correlation analysis is mainly utilized to evaluate the degree of multicollinearity in the explanatory variables (Miller, 1988). I used the pairwise correlation analysis in Stata because the issue of missing values is to be addressed appropriately. I selected the significant level at 5 percent. We ran the VIF test, although variables in the correlation matrix were not highly correlated. Since the test results were less than 10, there were no serious collinearity issue (Kutner et al. 2004).

The average number of patents that target firms had (470.95) is far larger than the average number of target firms' trademarks (7.00) (Table 2.4.1.1). With respect to SAS orientation, CMNEs had close inclinations of patent seeking and trademark seeking FDI reaching 21% and 23% respectively. Interestingly, there was a greater proportion of Chinese acquirers affiliated to a business group, occupying 76% of the total number of acquirers. In terms of acquiring firms' international experience, 73% of Chinese firms had invested abroad prior to their CBM&As. As for deals, the average of ownership level after M&As exceeded 73%, suggesting CMNEs generally seek high levels of control when undertaking CBM&As.

Table 2.4.1.1 Descriptive analysis results 1

	Variable	Observation	Mean	Standard deviation	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	TNPAT	843	470.95	5602.13	0	103490	1																			
2	TNTRADM	843	7.00	46.05	0	819	0.26*	1																		
3	LTNPAT	843	0.65	1.67	0.00	11.55	0.51*	0.45*	1																	
4	LTNTRADM	843	0.49	1.11	0.00	6.71	0.29*	0.61*	0.61*	1																
5	T_PAT	843	0.21	0.41	0	1	0.16*	0.25*	0.76*	0.50*	1															
6	T_TRADM	843	0.23	0.42	0	1	0.15*	0.28*	0.49*	0.81*	0.50*	1														
7	BGA	843	0.76	0.43	0	1	0.04	0.05	0.05	0.04	0.04	-0.01	1													
8	BG_FIN	843	0.52	0.50	0	1	0.05	0.07	-0.01	0.02	-0.05	-0.05	0.59*	1												
9	BG_RD	843	0.58	0.49	0	1	0.07*	0.05	0.13*	0.07*	0.12*	0.04	0.67*	0.40*	1											
10	STATE	843	0.51	0.50	0	1	0.00	-0.01	-0.05	-0.07*	-0.10*	-0.12*	0.49*	0.53*	0.42*	1										
11	PRIVATE	843	0.49	0.50	0	1	0.00	0.01	0.05	0.07*	0.10*	0.12*	-0.49*	-0.53*	-0.42*	-1.00	1									
12	LAGE	843	2.80	0.58	0.00	5.11	0.03	0.02	0.00	-0.01	-0.07	-0.06	0.19*	0.24*	0.24*	0.25*	-0.25*	1								
13	PROFIT	780	8.51	26.93	-253.00	150.00	-0.01	0.02	0.03	0.04	0.05	0.05	0.05	0.12*	0.07	0.00	0.00	0.06	1							
14	LTASSET	798	22.01	2.64	10.17	28.86	0.04	0.07	0.02	0.04	-0.03	-0.02	0.45*	0.55*	0.33*	0.46*	-0.46*	0.29*	0.21*	1						
15	LANPAT	843	2.01	2.85	0.00	10.59	0.13*	0.11*	0.20*	0.12*	0.15*	0.11*	0.19*	0.14*	0.26*	0.13*	-0.13*	0.15*	0.05	0.34*	1					
16	LANTRADM	843	0.56	0.98	0.00	4.97	0.13*	0.08*	0.14*	0.14*	0.12*	0.15*	0.16*	0.20*	0.21*	0.01	-0.01	0.18*	0.12*	0.36*	0.53*	1				
17	FEXPE	843	0.73	0.44	0	1	-0.03	0.02	-0.01	0.04	-0.01	0.04	0.19*	0.23*	0.12*	0.16*	-0.16*	0.11*	0.04	0.28*	0.15*	0.16*	1			
18	PUBLIC	843	0.53	0.50	0	1	-0.07	0.04	-0.04	-0.03	0.01	-0.03	-0.06	-0.02	-0.09*	-0.09*	0.09*	-0.08*	0.03	0.03	0.10*	0.03	0.16*	1		
19	OWNTRANS	843	73.54	32.86	10.00	100.00	0.05	-0.02	0.01	-0.01	0.02	0.00	-0.02	-0.14*	0.03	-0.15*	0.15*	0.00	0.09*	-0.14*	-0.04	0.03	-0.07	0.06	1	
20	DEVOPED	843	0.72	0.45	0	1	0.03	0.08*	0.17*	0.18*	0.24*	0.22*	0.05	-0.03	0.11*	0.04	-0.04	-0.04	-0.05	0.04	0.13*	0.09*	0.08*	-0.11*	0.02	1

Notes: Pairwise correlations; significant at p<0.05

Table 2.4.1.2 mainly report the distribution of CMNEs' SAS FDI projects. First of all, I can find that 69.07% of Chinese acquirers are affiliated to a business group, occupying 75.56% CMNEs' CBM&As from 2006 to 2015. There were more trademark seeking FDI projects (196) than patent-seeking FDI projects (177). Secondly, Chinese firms were more likely to acquire both patents and trademarks in these developed countries, including the United States of America (51 and 57 respectively), Germany (41 and 27 respectively) and Japan (11 and 13 respectively). In addition, I found that CMNEs may also go to emerging economies (e.g. Republic of Korea) for patent and trademark seeking FDI. Target firms located in tax havens and offshore financial centers (e.g. Hong Kong, Virgin Islands (British), and Cayman Islands also have patents and trademarks.

Table 2.4.1.2 Research sample characteristics 2

Chinese MNEs' cross-border M&A deals	**Counts**	**Percent (Acquirers)**	**Number of M&A deals**	**Percent (M&A Deals)**
Chinese acquirers	514	1.0000	843	1
Business group affiliated acquirers	355	0.6907	637	0.7556
Business group with financial centre	212	0.4125	440	0.5219
Business group with R&D centre	256	0.4952	491	0.5824
State-owned acquirers	224	0.4358	433	0.5136
Privately-owned acquirers	290	0.5642	410	0.4864
		Percent (deals)		
M&As-Target firms	843	1.0000		
Target firms with patents	177	0.2100		
Target firms with trademarks	196	0.2325		
Total number of target countries	**59**			
Top 15 locations		**Percent (deals)**	**Target firm: >=1 patent**	**Target firm: >=1 trademark**
United States of America	127	0.1507	51	57
Australia	125	0.1483	10	7
Hong Kong	84	0.0985	1	3

Germany	61	0.0724	41	27
Canada	53	0.0629	5	7
United Kingdom	52	0.0617	5	13
Virgin Islands (British)	33	0.0391	0	1
Singapore	27	0.0320	2	3
Japan	26	0.0308	11	13
Bermuda	24	0.0285	4	3
Cayman Islands	19	0.0225	1	1
France	17	0.0202	4	6
Italy	16	0.0190	9	9
Netherlands	13	0.0154	2	5
Korea, Republic of	12	0.0142	4	7

2.4.2 NLB assets seeking orientation

Table 2.4.2.1 reports the results of *probit* regression model for testing the likelihood of NLB assets seeking FDI from model 1 to model 5. Models 1-5 were designed to test hypotheses 1-a, 1-b and 1-c. Model 1 was the base model without adding industry control variables (including HITECH, MEDTECH, MEDTEC, LOWTEC, KNINTEN, and LEKNIN). Model 2 added the industry control variables. Due to business group characteristics, Model 3 further added BG_FIN and BG_RD variables. As discussed above, in the beginning Chinese governments encouraged the formation of business groups, and therefore a larger ratio of Chinese SOEs are business group affiliated in our sample. Then I split two subsamples. Model 4 was mainly designed to study the Chinese SOE sample and model 5 for studying the Chinese POE sample.

I achieved significant modelling results from model 1 to model 5. In terms of Pseudo R2, a better model fit from model 1 to model 3 was achieved. The mean VIF value in each model was less than 5, which means there was no multicollinearity problem affecting estimations.

For hypotheses tests, first of all, the coefficients for *BGA* in both models 1 and 2 were positive and significant (0.4398 at $p < 0.01$ and 0.5511 at $p < 0.01$ respectively), indicating that Chinese business group affiliated firms are more likely to seek NLB assets (i.e. patents) than independent firms. In this regard, I can support the Hypothesis 1-a. In model 3, I found that BG_RD was also positive and significant (0.6345 at 99.99% confidence level). But BG_FIN was insignificant and negative. Hence, we can reject Hypothesis 1-b, but accept Hypothesis 1-c. It means that Chinese acquirers affiliated to a business group with their own R&D center have higher likelihoods of seeking NLB assets from target firms. In contrast, the internal capital market within a business group may not significantly influence Chinese affiliated firms' NLB assets seeking activities via CBM&As. Moreover, according to models 4-5, business group affiliation may significantly determine Chinese POEs' likelihood of pursuing patents seeking FDI. There was no significant relationship between business group affiliation and Chinese SOEs' likelihood of patents seeking FDI.

Table 2.4.2.1: Probit regression model-NLB assets seeking FDI 3

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
	Full sample	Full sample	Full sample	SOE sample	POE sample
DEVOPED	1.0325***	1.1064***	1.1223***	1.2104***	1.1632***
	0.1551	*0.1619*	*0.1625*	*0.2574*	*0.2452*
BGA	0.4604**	0.5861**	0.1011	0.7560	0.5359**
	0.1603	*0.1689*	*0.2298*	*0.5408*	*0.1930*
BG_FIN			-0.0265		
			0.1536		
BG_RD			0.6524***		
			0.1831		
STATE	-0.3871**	-0.3356*	-0.4097**		
	0.1315	*0.1339*	*0.1429*		
LAGE	-0.0650	-0.1139	-0.1574	-0.1223	-0.0825
	0.1145	*0.1196*	*0.1245*	*0.1694*	*0.1872*
PROFIT	0.0033	0.0038	0.0030	-0.0043	0.0096**
	0.0024	*0.0025*	*0.0026*	*0.0039*	*0.0034*
LTASSET	-0.0488	-0.0153	-0.0049	0.0068	-0.0446
	0.0304	*0.0332*	*0.0362*	*0.0503*	*0.0498*
LANPAT	0.0653**	0.0571*	0.0546*	0.0091	0.1338**
	0.0217	*0.0258*	*0.0259*	*0.0350*	*0.0417*
LANTRADM	0.0619	0.0665	0.0443	0.1226	-0.0127
	0.0627	*0.0713*	*0.0731*	*0.1151*	*0.0948*
FEXPE	-0.1855	-0.2527+	-0.2527+	-0.4114*	-0.1642
	0.1362	*0.1372*	*0.1389*	*0.2049*	*0.1871*
PUBLIC	0.0368	0.0132	0.0512	0.0693	0.1421
	0.1149	*0.1181*	*0.1210*	*0.1678*	*0.1809*
OWNTRANS	-0.0013	-0.0016	-0.0020	0.0009	-0.0066*
	0.0017	*0.0018*	*0.0018*	*0.0025*	*0.0026*
HITECH		1.0868***	1.1157***	0.9581*	1.1191*
		0.2466	*0.2532*	*0.4089*	*0.4812*
MEDTEC		0.6540**	0.7320***	0.5468*	0.7333
		0.1934	*0.2005*	*0.2337*	*0.4568*
LOWTEC		0.8026**	0.9361**	0.2544	1.1256*
		0.2867	*0.2954*	*0.4768*	*0.5085*
KNINTEN		0.2647	0.3834	0.2798	0.3932
		0.2329	*0.2375*	*0.2984*	*0.4827*
LEKNIN		0.2379	0.3495	0.1614	0.2126
		0.2623	*0.2715*	*0.3388*	*0.5192*
Constant	-0.2444	-1.3785+	-1.5629+	-2.3022	-0.8846
	0.7001	*0.8292*	*0.8721*	*1.4789*	*1.2534*
Year control	Included	Included	Included	Included	Included
Observations	780	780	780	417	363
Wald chi2	102.92	139.32	153.54	69.64	83.29

Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.1382	0.1763	0.1929	0.179	0.2305
Log pseudolikelihood	-351.3427	-335.8141	-329.03864	-158.792	-161.3662
Mean vif	2.34	2.38	2.42	2.38	2.38

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

Table 2.4.2.2 displays results on studying CMNEs' NLB assets by applying negative binomial regression models. Models 6-10 used the number of target firms' patents as dependent variables. Equally, model 6 did not add industry variables. Model 8 further added BG_FIN and BG_RD, and models 9-10 were made to address SOE and POE sample. These six models are all significant at p value less than 0.001. The LR test of alpha allows us to decide whether we choose the Poisson or Negative binomial regression model. I found that LR test results were all significant and then reject the null hypothesis of choosing the Poisson regression model.

As discussed above, since there was overdispersion in our data, the 'Voung' test allows us to consider whether I need to use the zero-inflated negative binomial regression model instead of the standard negative binomial regression model. Except for model 6, I achieved insignificant Voung test results for models 7-10. Then I kept using a standard negative binomial regression model for testing hypotheses. The BGA variable was significant if I selected 90% confidence interval from model 7. I achieved a more significant result on BG_RD in model 8 which its coefficient was 3.9384 at 99.99% confidence interval. Then I can conclude that group affiliated firms are more likely to acquire the target firm that has a larger quantity number of patents, especially for those business groups having their own R&D center. As for ownership difference, I found that business group affiliation can significantly facilitate Chinese SOEs' amounts of patent seeking FDI, but not for those of Chinese POEs.

Table 2.4.2.2: Negative binomial regression-NLB assets seeking FDI 4

Variable	Model 6	Model 7	Model 8	Model 9	Model 10
	Full sample	Full sample	Full sample	SOE sample	POE sample
DEVOPED	2.4235***	2.6052***	2.7149***	4.4224***	3.5848***
	0.6361	*0.6110*	*0.6339*	*0.9279*	*0.5550*
BGA	1.0993+	1.8118**	-0.1447	6.2930***	1.2515*
	0.6074	*0.6022*	*0.8084*	*1.7813*	*0.5329*
BG_FIN			-1.5929*		
			0.6353		
BG_RD			4.3827***		
			0.7051		
STATE	-0.2710	-0.6779	-1.2888*		
	0.5663	*0.4849*	*0.5245*		
LAGE	-0.2284	-0.3275	-0.9095+	-2.2988*	0.8927*
	0.4990	*0.4079*	*0.5022*	*1.0426*	*0.4086*
PROFIT	-0.0080	-0.0057	-0.0077	-0.0790**	0.0179*
	0.0102	*0.0073*	*0.0075*	*0.0258*	*0.0072*
LTASSET	-0.0353	0.0042	0.0253	0.2185	0.0811
	0.1015	*0.0876*	*0.0875*	*0.1355*	*0.1366*
LANPAT	0.5038***	0.4033***	0.4131***	0.0790	0.6004***
	0.0817	*0.0842*	*0.0843*	*0.1295*	*0.0847*
LANTRADM	0.3257	0.5270*	0.2916	0.5172	-0.6180**
	0.2675	*0.2352*	*0.2586*	*0.5424*	*0.1987*
FEXPE	-0.7490+	-0.7911*	-0.8735+	-4.4369***	-0.2733
	0.4299	*0.4031*	*0.4716*	*0.9862*	*0.5149*
PUBLIC	-0.5397	-0.4140	-0.3179	-2.5191***	0.2417
	0.4583	*0.4374*	*0.4665*	*0.6757*	*0.4972*
OWNTRANS	0.0048	0.0014	0.0033	-0.0140	-0.0219**
	0.0060	*0.0057*	*0.0060*	*0.0095*	*0.0070*
HITECH		1.5216+	1.8410*	1.3910	2.6534+
		0.8008	*0.8754*	*1.5496*	*1.3904*
MEDTEC		1.8068**	1.8174**	2.2629+	2.7329*
		0.6783	*0.6901*	*1.2438*	*1.2533*
LOWTEC		0.0870	1.5531	1.6962	3.1600+
		0.9819	*1.2302*	*1.8004*	*1.6497*
KNINTEN		-1.4338+	-0.7985	1.4068	0.5417
		0.7369	*0.7931*	*1.5370*	*1.3360*
LEKNIN		-0.7412	0.2446	-3.3901*	2.0526
		0.7997	*0.9362*	*1.3985*	*1.3575*
Constant	0.6804	-1.5595	-0.4341	-2.3229	-6.256662
	2.6314	*2.0191*	*2.1405*	*3.8300*	*2.0441*
Year control	Included	Included	Included	Included	Included
Observations	780	780	780	417	363
Wald chi2	289.31	458.71	479.86	308.52	501.19

Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.0499	0.057	0.0626	0.0701	0.1135
Log pseudolikelihood	-1251.5346	-1242.2101	-1234.8364	-564.6423	-625.8147
LR test of alpha=0					
Prob>=chibar2	0.0000	0.0000	0.0000	0.0000	0.0000
Mean vif	2.34	2.38	2.42	2.38	2.38
Voung test of zinb vs standard negative binomial (inflate _cons)					
z	0.49	0.55	-0.01	1.47	-0.03
Pr>z	0.311	0.2917	0.5049	0.0713	0.513

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

Furthermore, I added robustness checks to better deal with potential endogeneity problems in the estimations. Table 2.4.2.3 reported the *Ivprobit* regression model on NLB assets seeking FDI. Wald tests of exogeneity in models 11-15 were all significant, meaning DEVOPED is an endogenous variable. Additionally, the acceptable threshold of VIF value should be less than 10 (Hair et al. 1995; Neter, Wasserman, and Kutner, 1989). In this study, the mean value of all VIFs from model 11 to model 15 is well below 4, indicating that these models do not suffer from serious problems of multicollinearity. The variable 'DEVOPED' was significant and positive from Model 11 to Model 15 at the 99.99% confidence interval. In short, Chinese firms were more likely to choose developed countries for patents seeking investment.

By comparison, 'BGA' in Models 1-2 and Models 11-12 respectively are both significant and positive, which therefore provides stronger evidence showing that Chinese group-affiliated firms tend to seek NLB assets. 'LANPAT' in model 5 and model 15 are both positive and significant at the 99% confidence interval, which means Chinese POEs' innovation performance significantly determines their likelihood of seeking foreign technologies via M&As. As for industry control variables, both model 2 and model 12 shows that 'HITECH', 'MEDTEC' and 'LOWTEC' are all positive and significant.

Table 2.4.2.3: Ivprobit regression model -NLB assets seeking FDI 5

Models	Model 11	Model 12	Model 13	Model 14	Model 15
Variables	Full sample	Full sample	Full sample	SOEs	POEs
DEVOPED	1.6805***	1.8309***	1.8343***	1.9806***	1.9014***
	0.2228	*0.2267*	*0.2300*	*0.3511*	*0.3074*
BGA *(H 1-a)*	0.4129**	0.5189**	0.0817	0.7864	0.4254*
	0.1573	*0.1656*	*0.2181*	*0.4894*	*0.1928*
BG_FIN *(H 1-b)*			0.0575		
			0.1491		
BG_RD *(H 1-c)*			0.5434**		
			0.1786		
STATE	-0.3642**	-0.3029*	-0.3792**		
	0.1271	*0.1297*	*0.1395*		
LAGE	0.0104	-0.0291	-0.0673	-0.0324	-0.0262
	0.1071	*0.1122*	*0.1157*	*0.1618*	*0.1723*
PROFIT	0.0043+	0.0048*	0.0040	-0.0002	0.0089**
	0.0024	*0.0024*	*0.0025*	*0.0043*	*0.0032*
LTASSET	-0.0467	-0.0098	-0.0062	0.0224	-0.0324
	0.0302	*0.0326*	*0.0352*	*0.0476*	*0.0510*
LANPAT	0.0468*	0.0400	0.0407	-0.0022	0.1133**
	0.0216	*0.0248*	*0.0250*	*0.0336*	*0.0392*
LANTRADM	0.0503	0.0463	0.0258	0.0588	-0.0250
	0.0605	*0.0675*	*0.0691*	*0.1110*	*0.0897*
FEXPE	-0.2644*	-0.3290*	-0.3330*	-0.4862*	-0.2047
	0.1332	*0.1340*	*0.1358*	*0.1970*	*0.1839*
PUBLIC	0.1300	0.1185	0.1483	0.1844	0.2101
	0.1105	*0.1139*	*0.1164*	*0.1635*	*0.1716*
OWNTRANS	-0.0020	-0.0023	-0.0026	0.0005	-0.0078**
	0.0016	*0.0017*	*0.0017*	*0.0024*	*0.0025*
HITECH		1.1094***	1.1461***	1.2376**	1.0510*
		0.2412	*0.2476*	*0.3807*	*0.4664*
MEDTEC		0.6349**	0.7124***	0.5837*	0.7451+
		0.1878	*0.1946*	*0.2281*	*0.4434*
LOWTEC		0.8058**	0.9291**	0.3326	1.1218*
		0.2786	*0.2864*	*0.4554*	*0.4964*
KNINTEN		0.2738	0.3783+	0.2959	0.3980
		0.2233	*0.2290*	*0.2851*	*0.4692*
LEKNIN		0.3927	0.4828+	0.3296	0.4073
		0.2522	*0.2604*	*0.3177*	*0.5108*
Year control	Included	Included	Included	Included	Included
Constant	-0.7619	-2.0336*	-2.0975*	-3.3298*	-1.4887
	0.6930	*0.8063*	*0.8436*	*1.3720*	*1.1903*
Observations	776	776	776	413	363
Wald chi2	134.51	191.3	204.4	96.57	120.81

Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000
Log pseudolikelihood	-602.3701	-575.2191	-567.5770	-293.8573	-248.8329
Wald test of exogeneity					
chi2	13.4	15.43	14.6	6.88	9.81
Prob>chi2	0.0003	0.0001	0.0001	0.0087	0.0017
Mean vif	2.4	2.42	2.46	2.43	2.43

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

Table 2.4.2.4 presented the *IVgmm* regression model. The DWH test displayed in Table 2.4.2.4 (Models 16-20) proved that DEVOPED is an endogenous variable. To test the overidentifying restrictions in the context of GMM, we employed J statistic of Hansen (1982). Hansen J results in models 16-20 were all insignificant, meaning the two instrumental variables were appropriately utilized in the *IVgmm* regression models. I consistently found DEVELOPED was significant and positive in Models 16-20. Moreover, I found that BGA in Model 16 and Model 17 are both significant and positive, meaning business group affiliation also significantly facilitates CMNEs' amounts of NLB asset seeking FDI. BG_RD in Model 18 is significant and positive (0.3887 at p value <0.01). BG_FIN is still not significant. However, I did not find a significant difference about the influence of business group affiliation between SOE samples and POE samples.

Table 2.4.2.4: IV(GMM) regression-NLB asset seeking FDI 6

Models	Model 16	Model 17	Model 18	Model 19	Model 20
Variables	Full sample	Full sample	Full sample	SOEs	POEs
DEVOPED	1.3378***	1.3262***	1.2751***	1.5196***	1.3209***
	0.1955	*0.2029*	*0.2052*	*0.3824*	*0.2449*
BGA (*H 1-a*)	0.3250*	0.3448*	0.0035	0.5395	0.1751
	0.1498	*0.1546*	*0.1838*	*0.4493*	*0.1915*
BG_FIN *(H 1-b)*			0.1687		
			0.1883		
BG_RD *(H 1-c)*			0.3887**		
			0.1185		
STATE	-0.3704*	-0.3354+	-0.4156*		
	0.1753	*0.1772*	*0.1907*		
LAGE	0.1554	0.1034	0.0641	-0.0365	0.1466
	0.1149	*0.1146*	*0.1142*	*0.1644*	*0.1572*
PROFIT	0.0022	0.0023	0.0017	-0.0009	0.0031
	0.0017	*0.0018*	*0.0017*	*0.0033*	*0.0024*
LTASSET	-0.0311	0.0016	0.0016	0.0423	-0.0044
	0.0268	*0.0294*	*0.0293*	*0.0492*	*0.0472*
LANPAT	0.0970***	0.0813**	0.0821**	-0.0270	0.2226***
	0.0278	*0.0311*	*0.0316*	*0.0319*	*0.0601*
LANTRADM	0.0542	0.0645	0.0365	0.2062	-0.1438
	0.0779	*0.0815*	*0.0821*	*0.1300*	*0.1068*
FEXPE	-0.2172	-0.2394	-0.2447	-0.4016+	-0.1241
	0.1581	*0.1573*	*0.1559*	*0.2431*	*0.2022*
PUBLIC	-0.0592	-0.0734	-0.0569	0.0564	-0.0636
	0.1248	*0.1234*	*0.1226*	*0.1615*	*0.1809*
OWNTRANS	-0.0016	-0.0015	-0.0016	-0.0007	-0.0043
	0.0020	*0.0020*	*0.0020*	*0.0028*	*0.0028*
HITECH		0.6908*	0.7221**	0.8120	0.5854+
		0.2693	*0.2675*	*0.5068*	*0.3414*
MEDTEC		0.4502*	0.5111**	0.2336	0.6295*
		0.1911	*0.1927*	*0.2349*	*0.3033*
LOWTEC		0.5334*	0.6029**	0.2049	0.9613**
		0.2208	*0.2222*	*0.2948*	*0.3396*
KNINTEN		0.0254	0.1005	-0.1430	0.2373
		0.2017	*0.2042*	*0.2827*	*0.3040*
LEKNIN		0.2477	0.3139	-0.1619	0.6554+
		0.2191	*0.2213*	*0.2701*	*0.3446*
Year control	Included	Included	Included	Included	Included
Constants	-0.0137	-0.8407	-0.8000	-1.7449	-0.5869
	0.6519	*0.7477*	*0.7324*	*1.4404*	*0.9437*
Observations	776	776	776	413	363
Wald chi2	76.62	92.69	96.91	38.69	79.33

Prob>chi2	0.0000	0.0000	0.0000	0.0294	0.0000
R-squared	0.0641	0.0802	0.0921	0.0366	0.1972
DWH test					
Robust score chi2	25.1732	24.7525	23.3523	11.343	15.672
	(p=0.0000)	(p=0.0000)	(p=0.0000)	(p=0.0008)	(p=0.0001)
Robust regression F	25.9768 (p=0.0000)	25.4433 (p=0.0000)	23.9057 (0.0000)	11.5601 (p=0.0007)	14.5641 (p=0.0002)
Test of overidentifying restriction:					
Hansens J chi2	1.44996	1.11971	1.22091	1.52054	0.225254
	(p=0.2285)	(p=0.2900)	(p=0.2692)	(p=0.2175)	(0.06351)
Mean vif	2.4	2.42	2.46	2.43	2.43

Notes: GMM weight matrix: robust; +p<0.10, *p<0.05, **p<0.01, ***p<0.001; Robust standard error (italic); coefficient (underline)

As noted above, I also used the Heckman's (1979) two-stage method to deal with self-selection bias. I added the lambda into models 1-20 (seen from Table A2.4.2.1 to TableA2.4.2.4 in the appendix). However, I still achieved quite consistent and similar results, especially on the main variables of BGA, BG_FIN, and BG_RD.

For further comparative explanations, I conducted a marginal effect analysis as Table 2.4.2.5 shows. Firstly, I can easily find that results on the influence of BGA and BG_RD are consistent in the *probit* model and the *ivprobit* model. In model 2-mar, if a Chinese firm is affiliated to a business group, then there is 12.64% possibility of a patents-oriented acquisition. After addressing the endogeneity problem, such possibility of seeking patents-oriented acquisition increases to 51.89% (seen model 12-mar). Likewise, based on model 13-mar, I can reach that business groups having their own R&D centers imply that their affiliated firms have 54.34% of pursuing NLB assets in foreign acquisition deals. More importantly, BGA is simply significant and positive in the POE sample (model 15-mar). It means business group affiliation plays a significant role on the NLB assets seeking of Chinese POEs other than SOEs.

Table 2.4.2.5 Marginal effects-NLB assets seeking FDI 7

	Model 1-mar	Model 2-mar	Model 3-mar	Model 4-mar	Model 5-mar
	Full sample	Full sample	Full sample	SOEs	POEs
1.BGA	0.1059**	0.1246***	0.0234	0.1174*	0.1331**
	0.0330	*0.0311*	*0.0523*	*0.0565*	*0.0468*
1.BG_FIN			-0.0062		
			0.0363		
1.BG_RD			0.1453***		
			0.0375		
	Model 11-mar	Model 12-mar	Model 13-mar	Model 14-mar	Model 15-mar
	Full sample	Full sample	Full sample	SOEs	POEs
1.BGA	0.4129**	0.5189**	0.0817	0.7864	0.4254*
	0.1573	*0.1656*	*0.2181*	*0.4894*	*0.1928*
1.BG_FIN			0.0575		
			0.1491		
1.BG_RD			0.5434**		
			0.1786		

Notes: The marginal effect results on models 1-5 are displayed in from Model 1-mar to Model 5-mar; The marginal effect results on models 11-15 are displayed in from Model 11-mar to Model 15-mar;

Significance: +p<0.10, *p<0.05, **p<0.01, ***p<0.0001; Robust standard error (italic); coefficient (underline); i.BGA, i.BG_FIN, and i.BG_RD represent the three variables are dummy variables in modelling estimations.

Below, I display two further charts relating to the average marginal effects on the probability of patents seeking FDI. I also added variables about industry control variables (Figure 2.4.2.1 and Figure 2.4.2.2). Obviously, Chinese firms involved in the higher technology manufacturing industry have the highest likelihoods of seeking NLB assets (i.e. Patents).

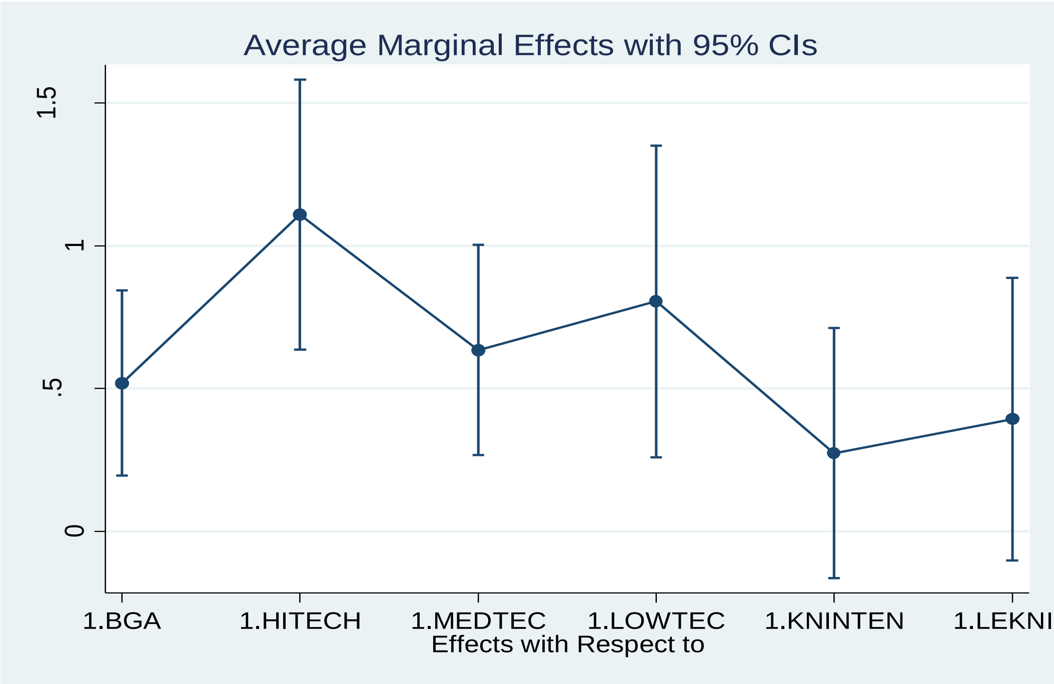


Figure 2.4.2.1 NLB assets seeking FDI–BGA and Industry types (Model 12-mar) 3

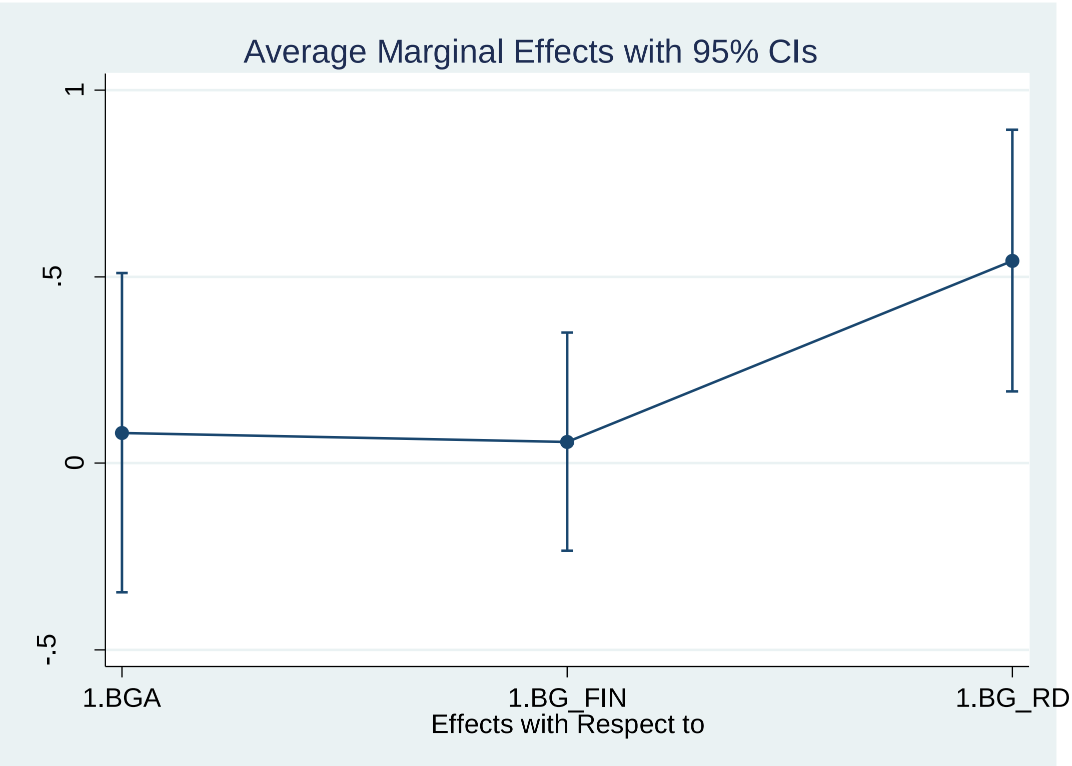


Figure 2.4.2.2 NLB assets seeking FDI- Business group characteristics (Model 13-mar) 4

Results from models 11-15 are mainly used to test hypotheses in this study. On balance, I accept the Hypothesis 1-a, Hypothesis 1-c and reject Hypothesis 1-b. In short, the business group affiliation significantly facilitates CMNEs' both likelihoods and amounts of NLB assets seeking FDI (i.e. patents) via CBM&As. Such positive influence would be further enhanced if business groups had their own R&D centers.

2.4.3 LB asset seeking orientation

Table 2.4.3.1 presents results of the *probit* regression model for testing the likelihood of LB assets seeking FDI (i.e. trademarks) from model 21 to model 25. Models 21-25 were made to test hypothesis 2-a, 2-b and 2-c. Model 21 was the base model without employing industry control variables. I added the control variables into the Models 22-25. Equally, I added BG_FIN and BG_RD variables into model 23 equally, further exploring the influence of business group characteristics on Chinese firms' likelihood of LB assets seeking FDI (i.e. trademarks). Model 24 and Model 25 are split samples including SOE sample and POE sample.

Compared to previous models studying the likelihood of patent seeking orientation, I did not find significant results on BGA affecting the likelihood of trademark seeking orientation from models 21-23. The BG_RD is positive and significant (0.3850 at 95% confidence level). It means Chinese business groups which have their own R&D centers significantly assist member firms to acquire target firms having trademarks. Hence, I can reject hypothesis 2-c, but accept hypothesis 2-a and hypothesis 2-b in terms of likelihood of trademark seeking.

Table 2.4.3.1 Probit model-LB assets seeking FDI 1

Variable	Model 21	Model 22	Model 23	Model 24	Model 25
	Full sample	Full sample	Full sample	SOE sample	POE sample
DEVOPED	0.7862***	0.8019***	0.7859***	0.5378**	1.1577***
	0.1399	*0.1461*	*0.1482*	*0.2036*	*0.2147*
BGA	0.1067	0.1045	-0.1436	-0.4408	0.1792
	0.1521	*0.1587*	*0.2143*	*0.4773*	*0.1880*
BG_FIN			0.0193		
			0.1490		
BG_RD			0.3330*		
			0.1658		
STATE	-0.3842**	-0.3679**	-0.4159**		
	0.1295	*0.1297*	*0.1370*		
LAGE	-0.0634	-0.1194	-0.1478	-0.1883	-0.0691
	0.1051	*0.1045*	*0.1063*	*0.1548*	*0.1540*
PROFIT	0.0022	0.0023	0.0020	-0.0042	0.0078**
	0.0020	*0.0021*	*0.0022*	*0.0037*	*0.0030*
LTASSET	-0.0206	0.0110	0.0161	0.0628	-0.0527
	0.0280	*0.0295*	*0.0311*	*0.0432*	*0.0443*
LANPAT	0.0213	0.0143	0.0127	-0.0282	0.0613
	0.0213	*0.0252*	*0.0253*	*0.0362*	*0.0402*
LANTRADM	0.1469*	0.1610*	0.1444*	0.1679	0.1750*
	0.0606	*0.0656*	*0.0661*	*0.1115*	*0.0882*
FEXPE	0.0345	0.0015	-0.0016	-0.1233	0.0441
	0.1291	*0.1308*	*0.1317*	*0.2023*	*0.1799*
PUBLIC	-0.1523	-0.2183+	-0.2054+	-0.1578	-0.1027
	0.1119	*0.1135*	*0.1149*	*0.1603*	*0.1743*
OWNTRANS	-0.0025	-0.0025	-0.0028+	0.0015	-0.0093***
	0.0016	*0.0017*	*0.0017*	*0.0024*	*0.0025*
HITECH		0.4626*	0.4801*	-0.1117	1.3988**
		0.2296	*0.2331*	*0.3890*	*0.4716*
MEDTEC		0.3376+	0.3729+	0.1658	1.2211**
		0.1883	*0.1930*	*0.2319*	*0.4465*
LOWTEC		0.7374**	0.7951**	0.8353*	1.3649**
		0.2726	*0.2764*	*0.3668*	*0.5089*
KNINTEN		0.0174	0.0755	-0.1260	0.8747+
		0.2226	*0.2253*	*0.2788*	*0.4772*
LEKNIN		0.0536	0.1169	-0.0582	0.8586+
		0.2421	*0.2465*	*0.3194*	*0.4819*
Constant	-0.5837	-1.2767+	-1.3262+	-1.7818	-0.7680
	0.6317	*0.7219*	*0.7414*	*1.1843*	*1.2905*
Year control	Included	Included	Included	Included	Included
Observations	780	780	780	417	363
Wald chi2	77.58	88.82	89.55	39.91	80.26

Prob>chi2	0	0	0	0.0218	0
Pseudo R2	0.1085	0.1269	0.1319	0.107	0.2023
Log pseudolikelihood	-381.9872	-374.0721	-371.9212	-176.8035	-177.6241
Mean vif	2.34	2.38	2.42	2.38	2.38

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

Table 2.4.3.2 presents modelling results on studying the amount of CMNEs' trademark seeking FDI using the negative binomial regression model. Models 26-30 used the number of target firms' trademarks as proxies of LB assets, seen as dependent variables. I found significant and positive results on BGA in model 26. However, model 26 did not factor in industry control variables. Models 27-30 which add industry control variables, have better fitting models in terms of Pseudo R2 values. In models 27-30 BGA was significant in all models. Then I can accept hypothesis 2-a that Chinese business group affiliated firms have weaker orientation of seeking amounts of trademarks-orientated FDI. Selecting the 90% confidence interval allowed us to achieve the significant variable of BG_FIN. Then I reject hypothesis 2-c in terms of amounts of trademark seeking. In short, an internal capital market within a business group can facilitate member firms' LB assets acquisitions (i.e. trademarks). Also, I accept hypothesis 2-c since BG_RD in model 28 is also insignificant.

Table 2.4.3.2: Negative binomial regression-LB assets seeking FDI 2

Variable	Model 26	Model 27	Model 28	Model 29	Model 30
	Full sample	Full sample	Full sample	SOE sample	POE sample
DEVOPED	1.8893***	1.9139***	1.9472***	1.5066**	3.2802***
	0.3407	*0.3597*	*0.3561*	*0.5443*	*0.4313*
BGA	1.0553**	0.5786	0.0022	-0.7616	0.2502
	0.3688	*0.3793*	*0.5016*	*0.9555*	*0.3957*
BG_FIN			0.9051*		
			0.3854		
BG_RD			0.2768		
			0.3871		
STATE	-0.4792	-0.5738+	-0.7024*		
	0.3389	*0.3209*	*0.3222*		
LAGE	0.1746	-0.2184	-0.2833	-0.4141	0.0766
	0.2910	*0.2886*	*0.2881*	*0.3979*	*0.3161*
PROFIT	0.0054	0.0063	0.0055	-0.0091	0.0126
	0.0060	*0.0056*	*0.0059*	*0.0121*	*0.0092*
LTASSET	0.1157	0.1578*	0.1053	0.2706*	0.0797
	0.0738	*0.0768*	*0.0812*	*0.1135*	*0.1112*
LANPAT	0.1455*	0.1241*	0.1379*	-0.0784	0.3533***
	0.0585	*0.0617*	*0.0622*	*0.0854*	*0.0783*
LANTRADM	0.0316	0.2246	0.1434	0.8195***	-0.3175
	0.1606	*0.1710*	*0.1737*	*0.2108*	*0.2002*
FEXPE	-0.3259	-0.1290	-0.3290	-1.1695*	-0.2918
	0.3344	*0.3292*	*0.3264*	*0.4740*	*0.4041*
PUBLIC	-0.1695	-0.7134**	-0.7578**	-0.3346	-0.6264+
	0.2789	*0.2713*	*0.2772*	*0.4387*	*0.3703*
OWNTRANS	-0.0008	-0.0042	-0.0045	0.0060	-0.0154**
	0.0040	*0.0039*	*0.0040*	*0.0058*	*0.0050*
HITECH		-0.2477	-0.2017	-2.3919*	3.4348**
		0.5906	*0.5806*	*0.9910*	*1.0587*
MEDTEC		0.2037	0.3415	-0.4679	2.9538**
		0.5774	*0.5828*	*0.8361*	*1.0030*
LOWTEC		1.7292*	2.0134**	1.0141	5.1935***
		0.7073	*0.7193*	*1.0060*	*1.1733*
KNINTEN		-0.5431	-0.3939	-1.3514+	2.5443*
		0.5762	*0.5804*	*0.7449*	*1.0502*
LEKNIN		-1.1726*	-1.1014+	-2.9171***	3.7657**
		0.5993	*0.6074*	*0.8201*	*1.1412*
Constant	-4.7914**	-3.9685*	-2.8849	-5.5366+	-3.2686
	1.7443	*1.8384*	*1.8852*	*3.3031*	*2.0520*
Year control	Included	Included	Included	Included	Included
Observations	780	780	780	417	363
Wald chi2	145.85	174.63	185.63	143.05	175.93

Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.036	0.0429	0.0445	0.0477	0.0858
Log pseudolikelihood	-1078.3804	-1070.6902	-1068.9548	-472.9467	-561.6452
LR test of alpha=0					
Prob>=chibar2	0.0000	0.0000	0.0000	0.0000	0.0000
Mean vif	2.34	2.38	2.42	2.38	2.38
Voung test of zinb vs standard negative binomial (inflate _cons)					
z	-0.91	-2.01	-3.25	1.02	0.22
Pr>z	0.8187	0.9778	0.9994	0.1542	0.4143

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

Table 2.4.3.3 reports results on studying the likelihood of trademarks seeking via *Ivprobit* regression model. In models 31-35 the Wald test of exogeneity was significant in all models, meaning DEVOPED is an endogenous variable for studying Chinese firms' foreign trademark seeking FDI. As for hypotheses tests, I accept hypothesis 2-a, hypothesis 2-b, and hypothesis 2-c, since I found BGA, BG_FIN, and BG_RD were insignificant.

Table 2.4.3.3: Ivprobit regression model-LB assets seeking FDI 3

Models	Model 31	Model 32	Model 33	Model 34	Model 35
Variables	Full sample	Full sample	Full sample	SOEs	POEs
DEVOPED	1.3757***	1.4417***	1.4277***	1.1974**	1.8607***
	0.2230	*0.2235*	*0.2261*	*0.3730*	*0.2572*
BGA	0.0808	0.0658	-0.1691	-0.3429	0.0818
	0.1473	*0.1554*	*0.2094*	*0.4353*	*0.1855*
BG_FIN			0.0906		
			0.1439		
BG_RD			0.2727		
			0.1668		
STATE	-0.3678**	-0.3422**	-0.3956**		
	0.1254	*0.1257*	*0.1321*		
LAGE	-0.0015	-0.0546	-0.0791	-0.1143	-0.0453
	0.1047	*0.1038*	*0.1052*	*0.1544*	*0.1517*
PROFIT	0.0031	0.0032	0.0028	-0.0010	0.0071*
	0.0021	*0.0022*	*0.0022*	*0.0042*	*0.0029*
LTASSET	-0.0200	0.0148	0.0147	0.0709+	-0.0390
	0.0279	*0.0293*	*0.0309*	*0.0421*	*0.0433*
LANPAT	0.0081	0.0043	0.0045	-0.0359	0.0517
	0.0214	*0.0247*	*0.0249*	*0.0352*	*0.0386*
LANTRADM	0.1316*	0.1359*	0.1204+	0.1207	0.1396+
	0.0599	*0.0641*	*0.0642*	*0.1106*	*0.0844*
FEXPE	-0.0357	-0.0728	-0.0816	-0.1769	-0.0317
	0.1290	*0.1294*	*0.1304*	*0.1993*	*0.1748*
PUBLIC	-0.0698	-0.1262	-0.1153	-0.0663	-0.0274
	0.1118	*0.1142*	*0.1150*	*0.1641*	*0.1666*
OWNTRANS	-0.0028+	-0.0027+	-0.0029+	0.0015	-0.0096***
	0.0016	*0.0016*	*0.0016*	*0.0024*	*0.0025*
HITECH		0.5075*	0.5304*	0.1384	1.3447**
		0.2258	*0.2287*	*0.3830*	*0.4623*
MEDTEC		0.3449+	0.3822*	0.2124	1.2269**
		0.1861	*0.1903*	*0.2249*	*0.4370*
LOWTEC		0.7801**	0.8352**	0.9062*	1.3805**
		0.2728	*0.2760*	*0.3656*	*0.5016*
KNINTEN		0.0452	0.0955	-0.1002	0.8900+
		0.2202	*0.2230*	*0.2788*	*0.4662*
LEKNIN		0.2026	0.2509	0.0684	1.0398*
		0.2414	*0.2447*	*0.3117*	*0.4791*
Year control	Included	Included	Included	Included	Included
Constant	-1.0329	-1.8446*	-1.8098*	-2.6385*	-1.4373
	0.6353	*0.7152*	*0.7304*	*1.1757*	*1.2240*
Observations	776	776	776	413	363
Wald chi2	93.36	112.72	112.75	52.89	112.35

Prob>chi2	0.0000	0.0000	0.0000	0.0006	0.0000
Log pseudolikelihood	-633.68222	-614.42136	-610.9337	-312.01875	-265.63016
Wald test of exogeneity					
chi2	10.15	11.65	11.4	4.48	10.97
Prob>chi2	0.0014	0.0006	0.0007	0.0342	0.0009
Mean vif	2.4	2.42	2.46	2.43	2.43

Notes: DEVOPED is endogenous variable, LTGDP and IPRI are instrumental variables; Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

Table 2.4.3.4 presents the IVgmm regression model. The DWH test (models 36-40) also revealed that DEVOPED is an endogenous variable. Hansen J results also supported that there were no overidentified problems for two instrumental variables. Equally, I found that BGA, BG_FIN, BG_RD were all insignificant for testing the amounts of trademarks seeking FDI. Then I have more convincing evidence to accept hypothesis 2-a, hypothesis 2-b, and hypothesis 2-c.

Table 2.4.3.4: IV(GMM) regression-LB asset seeking FDI 4

Models	Model 36	Model 37	Model 38	Model 39	Model 40
Variables	Full sample	Full sample	Full sample	SOEs	POEs
DEVOPED	0.8389***	0.8742***	0.8591***	0.7883**	1.0345***
	0.1549	*0.1552*	*0.1587*	*0.2721*	*0.1871*
BGA	0.1662	0.1531	-0.0264	0.1213	0.1296
	0.1100	*0.1140*	*0.1433*	*0.2858*	*0.1436*
BG_FIN			0.1674		
			0.1136		
BG_RD			0.1562		
			0.1133		
STATE	-0.2785*	-0.2608*	-0.3125**		
	0.1148	*0.1131*	*0.1165*		
LAGE	0.0602	0.0172	-0.0013	-0.0518	0.0173
	0.0780	*0.0746*	*0.0748*	*0.0988*	*0.1128*
PROFIT	0.0011	0.0008	0.0005	-0.0017	0.0011
	0.0012	*0.0013*	*0.0013*	*0.0026*	*0.0016*
LTASSET	0.0004	0.0239	0.0190	0.0364	0.0117
	0.0183	*0.0193*	*0.0188*	*0.0266*	*0.0327*
LANPAT	0.0162	0.0212	0.0231	-0.0347	0.1006**
	0.0186	*0.0205*	*0.0208*	*0.0239*	*0.0361*
LANTRADM	0.0950+	0.0804	0.0649	0.1968*	-0.0562
	0.0500	*0.0510*	*0.0510*	*0.0811*	*0.0649*
FEXPE	-0.0607	-0.0861	-0.0958	-0.1295	-0.0524
	0.0988	*0.0983*	*0.0985*	*0.1369*	*0.1364*
PUBLIC	-0.0627	-0.1024	-0.0947	-0.0131	-0.1000
	0.0898	*0.0881*	*0.0880*	*0.1155*	*0.1359*
OWNTRANS	-0.0020	-0.0018	-0.0017	-0.0005	-0.0052*
	0.0013	*0.0013*	*0.0013*	*0.0016*	*0.0021*
HITECH		0.3297*	0.3516*	0.0424	0.4642+
		0.1659	*0.1675*	*0.2570*	*0.2642*
MEDTEC		0.1507	0.1870	-0.0122	0.4077+
		0.1222	*0.1259*	*0.1360*	*0.2291*
LOWTEC		0.6893**	0.7257**	0.6870*	0.7986*
		0.2194	*0.2199*	*0.2698*	*0.3184*
KNINTEN		0.0755	0.1111	-0.0364	0.3157
		0.1319	*0.1370*	*0.1702*	*0.2340*
LEKNIN		0.1453	0.1690	-0.1349	0.5018*
		0.1429	*0.1459*	*0.1583*	*0.2536*
Year control	Included	Included	Included	Included	Included
Constants	-0.1464	-0.6784	-0.5768	-0.9222	-0.2919
	0.4245	*0.4893*	*0.4786*	*0.8021*	*0.8156*
Observations	776	776	776	413	363
Wald chi2	70.25	87.12	88.35	45.58	81.24

Prob>chi2	0.0000	0.0000	0.0000	0.0050	0.0000
R-squared	0.0602	0.0746	0.0807	0.0496	0.1577
DWH test					
Robust score chi2	15.7367	16.5541	15.5668	7.95127	9.69682
	(p=0.0001)	(p=0.0000)	(p=0.0001)	(p=0.0048)	(p=0.0018)
Robust regression	16.984	18.1246	16.8755	8.57929	9.29759
F	(p=0.0000)	(p=0.0000)	(p=0.0000)	(p=0.0036)	(p=0.0025)
Test of overidentifying restriction:					
Hansens J chi2	2.4295	1.99474	2.18521	0.81768	0.231171
	(p=0.1191)	(p=0.1578)	(p=0.1393)	(p=0.3659)	(p=0.6307)
Mean vif	2.4	2.42	2.46	2.43	2.43

Notes: DEVOPED is endogenous variable, LTGDP and IPRI are instrumental variables; GMM weight matrix: robust; Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.001

To address the self-selection bias in defining business groups, I also added the lambda from previous *probit* estimation results into models 21-40 (seen from Table A2.4.3.1 to Table A2.4.3.4 in the appendix). I still obtained quite consistent and similar results on the main variables of BGA, BG_FIN, and BG_RD.

For the purpose of further explanations, Table 2.4.3.5 displayed the marginal effect results on models 21-25 and models 31-35. Given the endogeneity problem, we mainly relied on the modelling results that employed IV regression approaches. According to model 31-mar to model 35-mar, none of them are significant. Above all, I can support the argument that business group affiliation did not significantly determine CMNEs' both likelihood and amounts of LB assets seeking FDI, reject hypothesis 2.

Table 2.4.3.5 Marginal effects-LB assets seeking FDI 5

Models	Model 21-mar	Model 22-mar	Model 23-mar	Model 24-mar	Model 25-mar
Variables	Full sample	Full sample	Full sample	SOEs	POEs
1.BGA	0.0289	0.0277	-0.0396	-0.1209	0.0495
	0.0403	*0.0412*	*0.0603*	*0.1475*	*0.0514*
1.BG_FIN			0.0052		
			0.0400		
1.BG_RD			0.0872*		
			0.0416		
	Model 31-mar	Model 32-mar	Model 33-mar	Model 34-mar	Model 35-mar
	Full sample	Full sample	Full sample	SOEs	POEs
1.BGA	0.0808	0.0658	-0.1691	-0.3429	0.0818
	0.1473	*0.1554*	*0.2094*	*0.4353*	*0.1855*
1.BG_FIN			0.0906		
			0.1439		
1.BG_RD			0.2727		
			0.1668		

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

2.5 Discussion

Drawing from the location boundedness of FSAs (Rugman and Verbeke, 1992), this study is likely the first to explore whether business group affiliation determines EMNEs' specific type of SAS FDI strategies. I have found that business group affiliation significantly facilitates CMNEs' NLB assets seeking FDI as opposed to LB assets. How does this provide further insights into EMNE related theory and improve our understanding of how EMNEs (e.g. CMNEs) achieve competitive positions and compete with DMNEs? Firstly, I mainly discuss the theoretical implications drawn from my findings. Secondly, based on my findings, business groups as one main aspect of home country effects in emerging economies is discussed. Thirdly, my study partially contributes to the relevance of new internalization theory. Fourthly, the novelty of this study, as noted above, is about disaggregating strategic assets into technologies and brands, which could be another methodological contribution. In conclusion, other managerial implications and limitations in this study are discussed.

2.5.1 Theoretical implications

EMNEs' increasing internationalization via acquisitions has significant implications from the theory building perspective (Peng, 2012). To argue Dunning's OLI model, Hennart (2012:168) highlights that "*Some CSAs [country specific advantages] have owners, usually local firms, who can sometimes derive significant gains from the monopoly control of these resources. They can use this monopoly power to finance intangible-seeking investments in developed countries to obtain the firms specific advantages (FSAs) they lack and, hence compete with FSA-rich MNEs in their own market, and then internationally.*" As noted above, Chinese group affiliated firms relatively control more complementary local resources (CLRs) (i.e. financial and human resources) than independent firms. My findings suggest that business group affiliated firms with R&D centers have a higher likelihood of seeking NLB assets via foreign acquisitions. Thus, these research findings partially support Hennart's (2012) bundling model argument.

Buckley, Munjal, Enderwick, and Forsans (2016) used the value of acquisitions and the number of acquisitions as dependent variables, studying whether Indian MNEs are asset exploiting or asset augmenting. If the explanatory variable 'strategic assets augmentation' (dummy variable) is significant, then Indian MNEs are considered to be asset augmentation; if the explanatory variables such as 'Financial resource' (retained earnings as a proxy) and 'Technical intensity' (Ratio of R&D expenditure to sales) are significant, then Indian MNEs are considered to be asset exploiting (Buckley, Munjal, Enderwick, and Forsans, 2016). Buckley and colleagues (2016) believe that their work supports Dunnings' (2006) argument that asset exploitation and asset augmentation activities can be complementary. In this study I directly used target firms' number of patents and trademarks as dependent variables, and acquirers' number of patents and trademarks as explanatory variables respectively. Therefore, my findings provide stronger evidence supporting the EMNE asset augmentation perspective.

In the context of emerging economies, the prevailing assumption about business groups suggests that their emergence is to internalize various transactions as a response to address market failures or institutional voids (Khanna and Palepu, 1997). Business groups have been regarded as a 'catch-up' mechanism so as to imitate and absorbing foreign technologies (Carney, 2008a; Kock and Guillen, 2001), as significantly supported by my findings.

In the NLB assets seeking models, Chinese group affiliated firms have greater amounts and greater propensity for acquiring foreign patents via CBM&As than independent firms, which partly supports Luo and Tung (2007)'s springboard perspective and Rui and Yip (2008)'s strategic intent perspective. According to the subsample analyses, however, business group affiliation simply plays a significant role on Chinese POEs' NLB assets seeking. In other words, my findings reveal that internationalization of POEs from emerging economies are a better fit to the explanations by Luo and Tung's (2007) springboard perspective and Rui and Yip's (2008) strategic intent perspective.

2.5.2 Home country effects and Business group affiliation

Previous studies suggest that firms need to own FSAs when expanding foreign markets (Hymer, 1976; Dunning, 1977, 1983) and also need to address the 'liability of foreignness' (LOF) (Zaheer, 1995). EMNEs' increasing internationalization largely poses a challenge for IB theories due to their FSAs differing from traditional ownership advantages of DMNEs (Bhaumik, Driffield, and Zhou, 2016; Meyer and Xia, 2012; Ramamurti, 2008). However, the firm-specific advantages (FSAs) of EMNEs are unlikely to be the same as those of DMNEs, the former "*possess some unique and* *sustainable resources, capabilities or favoured access to markets which, if they chose to engage in asset augmenting foreign direct investment, they might expect to protect or augment*" (Dunning, 2006:139).

Moreover, owing to the distinctive home market conditions in emerging markets, Ramamurti (2012) argues that EMNEs may have differing ownership advantages. There are FSAs and country-specific advantages (CSAs) that EMNEs can exploit when undertaking OFDI (Ramamurti, 2009; Rugman, 2009). The EMNE literature suggests that CSAs, including access to natural resources, have been seen as an alternative to traditional firm-specific 'ownership' advantages (Bhaumik, Driffield, and Zhou, 2016). Also, Hennart (2012) suggests that CSAs can facilitate EMNEs' foreign acquisition deals for their asset augmentation purposes. In this study I found that business group affiliation significantly facilitates CMNEs' NLB asset-seeking via foreign acquisitions. Chinese business group-affiliated firms with R&D centres have a higher likelihood of seeking NLB assets from foreign firms. As a consequence, I may regard business group affiliation as one unique 'ownership' advantage or FSA.

Furthermore, why should technology seeking be more common in business group affiliated businesses? In my hypothesis development I argued that current business group related theory shows how business groups developed what Amsden and Hikino (1994) referred to as 'project execution capability'. It was defined as '*the skills required to establish or expand operating and other corporate facilities, including undertaking preinvestment feasibility studies, project management, project engineering (basic and detailed), procurement, construction and start-up of operations*' (Amsden and Hikino, 1994:129). Business groups in emerging markets become experts at internalising technology acquisition. They have strong incentives to do so, moreover, in part because they have access to local complementary resources, i.e. their domestic markets (Amsden and Hikino, 1994; Hennart, 2012; Petersen and Seifert, 2014). There are therefore very strong incentives for them to go overseas and acquire foreign technologies. Such codified technologies are relatively easily transferable. They can then be exploited in their domestic markets. Herein, it further supports that CMNEs tend to acquire foreign technologies for repatriation and exploitation in their home markets. Prior study has also proven that acquiring DMNEs significantly enhances Chinese business groups' patenting activity in the domestic market (Anderson, Sutherland and Severe, 2015). Chen and Shapiro (2012) empirically have found that increasing foreign R&D investments in host countries that are rich in technological resources significantly improves EMNEs' technological capabilities (i.e. using firm-level R&D spending as a proxy). Also, my findings support that Chinese business groups having their own R&D centres are more likely to seek patent-based assets from DMNEs.

The very earliest research on Chinese business groups identified internal capital markets as having a positive impact on the performance of group affiliated firms (Keister, 2000; Guest and Sutherland, 2010; Sutherland, 2001). More recent evidence also supports this finding. He, et al. (2013)'s study, for example, has also found that Chinese business groups assisted their affiliated firms by alleviating financial constraints via the group's internal capital market.[11] However, my findings reveal that internal capital market within a business group is not significantly related to member firms' both patents and trademarks seeking FDI.

Also, this study identified that business group affiliation is only significantly related to SAS activities by Chinese POEs rather than SOEs. To address domestic and international competition, Chinese POEs use business group affiliation as a 'springboard' to catch up with DMNEs.

2.5.3 Relevance of new internalization theory

The EMNE literature frequently alludes to the strong orientation of EMNEs towards all

[11] This, moreover, was found to play a more significant role on state-owned firms in raising finance than privately owned firms (He et al. 2013).

types of strategic assets (e.g. Child and Rodrigues, 2005; Deng, 2009; Luo and Tung, 2007; Rui and Yip, 2008). For instance, advanced technologies and known brands are invariably bundled together under the single term of 'strategic assets' (Deng, 2009; Luo and Tung, 2007; Ramamurti, 2012). It makes little attempt to disaggregate firms' strategic assets by their types or properties, largely neglecting the new internalization theory's suggestion proposed by Rugman and Verbeke (1992). However, in factual cases, it may lose value and be costly to transfer reputational resource-based assets to a foreign and unknown market (Rugman and Verbeke, 1992; Verbeke and Kano, 2015).

Accordingly, groups have capacities of combining financial, technical and managerial resources into business operations (Carney, 2008b). This study provides empirical evidence showing the positive and significant relationship between business group affiliation and Chinese firms' NLB related FDI (i.e. patent seeking), but not for LB (trademark seeking) FDI. This is an interesting finding and one that warrants further discussion.

Brands, however, are somewhat considered to be LB assets, especially in the firm's infancy. EMNEs relatively do not have stronger global brands, like DMNEs. Hence, EMNEs' brands are somewhat regarded as LB assets which are appropriately used in the home markets. As known, the Chinese domestic market is so huge that Chinese firms have to focus mainly on it. Chinese business groups often have their own renowned domestic brands. To maintain the competitive position in the home country markets, Chinese business group affiliates should be more likely to acquire NLB assets such as sophisticated technologies rather than LB assets (e.g. trademarks).

As discussed above, in terms of CLRs (Hennart, 2012), Chinese business groups may own greater monopoly resources and advantages than independent firms. As such, their brands wield considerable power in the domestic market, which remains partially closed to foreign competitors owing to their access to CLRs. Some of the most famous brands in China, for example, are such brands like China Mobile, ICBC, Baidu, Haier, Sinopec, Lenovo and so forth.[12] Arguably, in many of these sector foreign investors have been excluded, thus allowing large domestic groups to benefit from CLRs. These groups may leverage the value of their brand across different product lines, and in doing so act as an important signalling mechanism to potential customers. In this case, Chinese business groups largely have local brand reputation and may not actively acquire foreign brands. Drawing on 'New Internalization Theory' (Rugman and Verbeke, 1992), this study helps us realize the most importance of domestic market position for EMNEs, especially for those large emerging economies such as China, Indian.

In addition, this is not to say some LB assets could still be of great interests for EMNEs. EMNEs are likely seeking foreign market expansion. LB assets are likely to be more easily exploited between MNEs from geographic areas in which there are similarities and shorter physical distances. CMNEs, however, are likely to undertake rapid acquisition deals in comparatively distant developed markets (Child and Rodrigues, 2005; Deng, 2009; Kedia, Gaffney, and Clampit, 2012; Luo and Tung, 2007). Subsequently, the difference in patent seeking and trademark seeking should be given more attention as it can further assist the understanding the true antecedents of EMNEs' OFDI behaviours.

My findings regarding the location boundedness of strategic assets assist us further in understanding Petersen and Serfert's (2014) related propositions. Petersen and Serfert (2014) suggest that the assumption of asymmetrical LOF between EMNEs and DMNEs can adequately explain the springboard perspective, and the key to understanding the springboard perspective is not EMNEs' access to country-specific resource that facilitate FDI, but the high LOF addressed by DMNEs expanding in emerging markets relative to EMNEs in developed markets. In other words, the use of the LOF concept is based on the assumption that all EMNEs have an advantage over DMNEs regarding the

[12] In it, China Mobile has achieved the first position in the annual top 50 Most Valuable Chinese Brands, reaching a brand value of US$ 50,589 million (Allchin, 2012).

exploitation of acquired foreign assets in the home market. Specifically, foreign firms may be akin to local firms in emerging economies that do not have privileged treatment by the government and experience a liability of outsidership (LOO) (Petersen and Serfert, 2014). Moreover, Petersen and colleagues argued that EMNEs are subject to LOO in their home market that make them difficult to sufficiently exploit acquired strategic assets from developed markets, but EMNEs that are affiliated to a business group or state-owned have 'insiders' advantages that do not have to address LOO in their home market. In this study we testified that Chinese business groups, especially for those that possess R&D centers, have a higher likelihood of acquiring patents. Since patents are of NLB attributes discussed previously, business groups are more able to transfer them and exploit them in the home markets. Such findings significantly support Petersen and Serfert's (2014) propositions.

2.5.4 Other influential factors

In this research I have found that firms' prior technology innovation performance significantly determines foreign patents seeking activities via M&As by Chinese POEs rather than SOEs. It may imply that Chinese POEs would tend to acquire foreign patents if they had enough absorptive capacities. But for Chinese SOEs, they have favourable access to financial resources, supporting their activities of integrating foreign patents they sought. In addition, this finding is certainly consistent with and further contributes to many extant studies. For instance, there is significant empirical evidences showing that private ownership is significantly and positively related to Chinese firms' foreign SAS M&As (e.g. Cui, Meyer, and Hu, 2014; Huang and Chi, 2014; Lu, Liu, and Wang, 2011). This research contributes to the disaggregation of strategic assets as a gap in the literature of Chinese FDI.

In terms of the industry factor, Cui, Meyer, and Hu (2014) show that Chinese listed manufacturing firms tend to have a general SAS FDI based on survey research. My findings have shown that CMNEs in the manufacturing industry are more likely to seek foreign patents via M&As. Further, I have found that only those related to lower technology levels have a higher likelihood of acquiring foreign trademarks. Thus, my findings contribute significant evidence to existing research.

2.5.5 Methodological contribution

CMNEs' SAS FDI behaviors have often been investigated by employing the case study method, which refers to a small group of high profile CMNEs (Wei, 2010). In particular, Wei (2010) listed the cases like Haier (Liu and Li, 2002; Duysters et al. 2009), Lenovo (Liu, 2007), Huawei (Sun, 2009), and Galanz (Ge and Ding, 2008). Their findings reveal that many large CMNEs have actively acquired sophisticated technologies and established global brands. For example, Geely acquired the entire equity of Volvo cars and related intellectual property in 2010 (Guo and Tao, 2013); Wanda Group acquired AMC Theatres in 2012 (Kung and Back, 2012); Lenovo Group acquired IBM personal computing division in 2004 which largely augments its global brand value (Deng, 2007; He, Wang, and Tian, 2011).

Since CMNEs practically acquire foreign technologies and brands, we may need to add both patents and trademarks as SAS proxies into the empirical research. Existing studies to date have mainly used country level proxies (e.g. Buckley et al. 2007; De Beule and Duanmu, 2012; Li, Li, and Shapiro, 2012; Ramasamy, Yeung, and Laforet, 2012). In this study, firm-level data rather than aggregated host country-level data was used, in contrast to empirical work by Buckley et al. (2007), De Beule and Duanmu (2012), Drogendijk and Blomkvist (2013), Li, Li and Shapiro (2012), and Ramasamy, Yeung, and Laforet (2012)). To a considerable extent, this study marks a methodological step forward in exploring the SAS FDI activity of CMNEs in great detail. Consequently, my findings contribute to methodological issues in measuring strategic assets and studying EMNEs' specific SAS FDI.

2.6 Conclusion

To date, no empirical research has been developed to investigate what specific SAS FDI that CMNEs seek. In this research, the use of firm-level data largely assist in finding out the real determinants of CMNEs' SAS FDI. It may contribute a lot on the econometric analysis about EMNEs' distinct FDI strategies. Moreover, my findings suggest that business group affiliation is positively and significantly associated with affiliated firms' patent seeking, but not brand seeking. However, existing studies have provided evidence showing that CMNEs do acquire foreign brands (eg. Deng, 2009; Rui and Yip, 2008; Zheng et al. 2016). Therefore, the brand seeking FDI may lead IB scholars to a new research area such as EMNEs' brand development process during internationalization.

Chapter 3: State ownership types and Chinese MNEs' specific foreign direct investment strategies

3.1 Introduction

> *"The role of SOEs [State-owned Enterprises] in the global economy is rising, reflecting not only the internationalization of SOEs but the fact that these enterprises make up for a significant proportion of many of the world's fastest-growing economies."*
>
> (OECD, 2016:20)

Ramamurti (2012:41) has challenged us to ask the question: "*What is really different about emerging market multinationals?*" In terms of institutional contexts, there has been an increase in studies attempting to address this question. They consider, for example, the perspective that home country regulatory institutions in emerging markets may play a pivotal role (Luo, Xue, and Han, 2010; Peng, Wang, and Jiang, 2008; Rui and Yip, 2008; Sauvant and Chen, 2014; Xiao and Sun, 2005). Further, Chen, Li and Hambright (2016) argue that these studies imply, or call for, an institution-based view (RBV), specifically that governmental institutions in emerging economies may interactively affect multinational enterprises (MNEs) in undertaking outward foreign direct investment (OFDI) activities. Specifically: "*the internationalization of state-owned enterprises from a wide range of countries constitutes an important component of FDI*" (UNCTAD, 2017:30). A recent literature review by Luo and Zhang (2016)[13],

[13] Luo and Zhang (2016) systematically reviewed 166 articles from 11 leading IB and management journals published between 1990 and 2014.

reveals that Chinese (C) MNEs are leading the research on Emerging-country (E) MNEs. Luo, Xue and Han (2010) suggest that China, as the leading emerging economy in the world, is an ideal nation for exploring how government involvement affects its OFDI activities. A number of existing studies support the view that government involvement facilitates Chinese firms' increasing OFDI by promoting its '*Go Global*' policy (Cui and Jiang, 2012; Luo and Tung, 2007; Luo, Xue, and Han, 2010; Wang, Hong, Kafouros, and Wright, 2012).

According to one of the most widely cited IB studies on EMNEs[14], Buckley, Clegg, Cross, Liu, Voss and Zheng (2007) identify three special factors that may explain the determinants of Chinese OFDI. These include: capital market imperfections, the special ownership advantages of CMNEs, and the role of institutional factors. In the context of emerging-markets, both Chinese SOEs and POEs have to address market imperfections. However, Buckley (2004) argued that emerging market firms might have 'special' ownership advantages. For instance, SOEs may get easier access to below-market rates to raise funds (Scott, 2002). Such benefits may give SOEs a significant competitive advantage over POEs when undertaking OFDI. Furthermore, Luo, Xue and Han (2010) identify multiple advantages for state-sector CMNEs, including financial support and privileged treatment in support of their OFDI. For example, the number of Chinese SOEs ranked on the Fortune Global 500 has increased from 2 in 1996 to 86 in 2017 (105 Chinese mainland-based firms in total) (*Fortune*, 2017).

In contrast, "*the private sector may find it considerably harder to raise capital to undertake OFDI*" (Ning and Sutherland, 2012:171). Nevertheless, scholars argued that SOEs face greater institutional pressures than POEs when investing abroad (Cui and Jiang, 2012; Globerman and Shapiro, 2009). By and large, however, as Chen, Li and Hambright (2016) suggest, extant related literature reveals that there are inconsistent results as regards the role of government involvement and its effects on Chinese OFDI.

[14] This information is based on a literature review study by Luo and Zhang (2016).

These mixed results further motivate an exploration of the extent to which government involvement determines CMNEs' specific FDI strategies.

Dunning (1992) identified four main purposes of FDI strategies including: resource seeking, market seeking, efficiency seeking, and strategic asset seeking (SAS). It is often argued that CMNEs are actively acquiring the strategic assets they lack via foreign acquisitions, so as to alleviate their competitive weaknesses (Luo and Tung, 2007; Mathews, 2006; Rui and Yip, 2008). They may do this via 'spring-boarding', or alternatively (but similarly) 'linking, leveraging and learning' (Mathews, 2006). In comparison with DMNEs, Chinese groups today, however, still lack competitive strengths in areas such intangible assets, including advanced technologies or known brands (Child and Rodrigues, 2005; Lu, Liu, Wright, and Filatotchev, 2014). To address this deficit, Peng (2012:100) argued that CMNEs prefer acquisitions in order to '*acquire existing world-class brands, such as IBM's PC brand or Volvo.'* This is also the dominant view in the LLL model and the springboard perspective. Both stress that CMNEs are in a 'rush' to catch-up and that they engage in 'accelerated' internationalization. Although Greenfield FDI may also help acquire intangibles, it is a relatively more time consuming process than acquisition. Thus the latter approach, many have suggested, is the dominant entry mode used to acquire strategic assets. In the past two decades, EMNEs have expanded in foreign countries by mostly using M&A as the main entry mode (Buckley, Elia, and Kafouros, 2014; Deng and Yang, 2015).

Scott (1995) argues that there are three pillars of institutions including the regulative pillar, the normative pillar, and the cognitive pillar. In spite of the increasing development of its market economy, China somewhat maintains a political economy wherein government involvement plays a significant role in business by ownership and regulation (Deng, 2007). Government affiliation likely affects Chinese firms' resource use going abroad by posing coercive pressures and normative expectations (Wang et al. 2012), which are consistent with Scott's (1995) explanations of the regulative and normative pillars. Thus, there are significant differences between China's state-owned enterprises (SOEs) and privately-owned enterprises (POEs). Also, governments in different levels may have differing strategic interests and purposes on their controlled enterprises' strategies. A recent study by Huang, Xie and Reddy (2017), verifies that central SOEs have a lower likelihood of engaging in OFDI than local SOEs in the Chinese manufacturing sector. The important role of national team affiliation (mainly Central SOEs), moreover, may influence Chinese SAS orientation, as these central government-owned firms may receive greater support (although simultaneously may, be less entrepreneurial due to their closer links to the central government which necessitates greater consideration of non-business related interests such as employment, social stability and so on). In comparison, based on in-depth interviews with senior managers, Huang and Chi (2014) have found that Chinese POEs[15] are more likely to undertake both market- and SAS FDI.

Wang et al. (2012) distinguish two types of government involvement including government affiliation level and state ownership. The former construct reflects that governments want to engage in EMNEs' internationalization by establishing relationships with companies (Wank, 1995). In China's context, government affiliation levels refer to central-government level, provincial-government level, and municipal- or county-government level. The second construct means that the government is one of the shareholders of the firm (Wang et al. 2012). Furthermore, the Organization for Economic Co-operation and Development (OECD) (2009) defines SOEs as 'business entities established by central and local governments, and whose supervisory officials are from the government'. Moreover, considering several reformed records on Chinese SOEs in past decades, I offer an additional condition that SOEs' main controlling shareholder be the central, provincial, municipal or county level government. Notably, the two concepts are sometimes not correlated. A private firm may be affiliated to a higher government level, while the state-owned firm may be affiliated to a lower

[15] Here, POEs refer to Chinese Small and Medium-sized Enterprises (SMEs) (Huang and Chi, 2014).

government level. To deal with this issue, this paper will use the term 'state ownership types' by dividing Chinese firms into 4 levels according to the ultimate owner or the largest shareholder, can be the central government, provincial government, municipal government or county government, and private ownership.

No quantitative research, however, has addressed the question as to what extent Chinse firms with different state ownership types behave differently in terms of specific FDI strategies. OECD (2016) suggests that the first critical stage to explaining Chinese SOEs' investment is to identify the distinction between Chinese central SOEs, and the provincially and locally owned SOEs. UNCTAD (2017:36) "*The degree to which governments influence the decisions of SO-MNEs does not depend only on percentage ownership, but also on foreign expansion strategy.*" Herein, this further raises the question of to what extent does the state ownership types (*hereafter government affiliation levels instead*) affect CMNEs specific FDI strategies.

Recent data on CMNEs' cross-border mergers and acquisitions (CBM&As) (recorded between 2006 and 2015) was used. The findings reveal that Chinese POEs have a greater likelihood of augmenting both their technology and brand-based assets, and Chinese firms owned by a higher government affiliation level are actually less likely to seek both technological assets (i.e. a target firm's patents) and brand assets (i.e. a target firm's trademarks), but have a higher inclination to acquire target firms involved in the natural resources sector.

This paper is organized as follows: after discussing the broader theoretical framework in detail, firstly hypotheses are developed; secondly, the methodology is outlined. After presenting the empirical findings, I reflect upon this study's contributions to relevant EMNE specific FDI theories and practices.

3.2 Literature review

Institutional contexts, for example, vary considerably in emerging economies but are generally thought to be different from those of developed economies (Gammeltoft, Pradhan, and Goldstein, 2010). A number of scholars argue that EMNEs may use OFDI to escape domestic '*institutional voids*' (Cuervo-Cazurra and Genc, 2008; Luo and Tung, 2007; Witt and Lewin, 2007). Specifically, institutional voids refer to the fact that there are inefficient or volatile institutions in emerging economies (Cuervo-Cazurra and Genc, 2008; Gammeltoft, Pradhan, and Goldstein, 2010). This context results in competitive disadvantages of firms incorporated in emerging economies (Stoian and Mohr, 2016).

Nevertheless, not all firms in emerging economies lack competitive advantages. To illustrate, Luo, Xue and Han (2010) state that SOEs in emerging economies have multiple advantages including financial support and privileged treatment that may largely support their OFDI activities. Given the importance of financial resources for EMNEs, Buckley, Munjal, Enderwick and Forsans (2016) prove that Indian MNEs that accumulate more of their own financial resources are more likely to acquire foreign companies. In contrast, POEs in emerging economies may have to address more competition from SOEs in terms of access to home country resources. In that case, to escape unfair competition, firms, especially POEs are actively engaging in OFDI strategy (Stal and Cuervo-Cazurra, 2011).

Moreover, SOEs also achieve network advantages in that they can receive support and protection from government institutions (Li and Zhang, 2007); and priority advantages such as access to critical policy and aggregated industrial information (Sheng, Zhou, and Li, 2011). Such privileged benefits assist EMNEs, (especially for SOEs), counterbalancing their ownership and location disadvantages when expanding internationally (Aggarwal and Agmon, 1990).

On the other hand, both SOEs and POEs may actively engage the OFDI strategy to escape resource dependence on government support from the home country (Choudhury and Khanna, 2014; Cuervo-Cazurra, Inkpen, Musacchio and Ramaswamy, 2014). Especially for SOEs, Xia, Ma, Lu, and Yiu (2014) argue that significant state ownership largely makes them more dependent on governments for securing vital resources. It may lead to governments' intervention in SOEs' FDI strategy (Huang, Xie, and Reddy, 2017). Furthermore, Cui and Jiang (2012:265) emphasize that "*SOEs are, by definition, assets of home-country governments which makes them a part of their home-country institutions.*" In other words, strategic initiatives that SOEs make should be relatively in accordance with the general policy of the state. SOEs are thus, at least somewhat, required to support home institutions' interests (Zhang, Zhou, and Ebbers, 2011) rather than pursue own market orientation or SAS strategies. Residences in target countries also regard SOEs as representative of home country governments (Globerman and Shapiro, 2009). As a result, host country institutions may have more concerns when foreign investors are state-owned entities. For example, Zhang, Zhou and Ebbers (2011) have found that the likelihood of CMNEs that successfully complete a cross-border acquisition is lower if they are SOEs.

As such, there are likely three aspects of dark-side effects stemming from SOEs' higher dependence on domestic resources: firstly, it may reduce SOEs' willingness to expand abroad; secondly, it makes SOEs suffer lower levels of autonomy and market orientation due to more government' intervention (Huang, Xie, and Reddy, 2017; Lioukas, Bourantas, and Papadakis, 1993); thirdly, it may decrease SOEs' legitimacy in the target countries as they may be regarded as political instruments of governments (Cui and Jiang, 2012; Globerman and Shapiro, 2009). On the contrary, POEs are relatively driven to expand abroad by the need to mitigate unfavorable domestic institutional contexts, and especially the difficulties of raising capital (Luo and Tung, 2007). In particular, by surveying 51 Chinese POEs, Sutherland and Ning (2011) have found that these companies' main purposes of foreign expansion via a tax haven were both to raise financial capital to support foreign trade and business, but also for domestic purposes.

Thus, Cuervo-Cazurra et al. (2014) argued that existing theory does not present a consistent prediction of state ownership influence on MNEs' OFDI. Many other empirical studies provide either an insignificant or negative effect of state ownership on EMNEs' OFDI (Huang, Xie, Li, and Reddy, 2017; Hu and Cui, 2014; Lu, Liu, Filatotchev, and Wright, 2014; Xia, Ma, Lu and Yiu, 2014). These mixed findings imply that the linkages between state ownership influence and CMNEs' OFDI may be more complex than presumed.

In addition, owing to differences between SOEs and POEs, these firms may have to address different institutional pressures meanwhile pursuing different IB strategies. For example, "*In countries with strong technological development, concerns might arise about losing critical technologies to foreign competitors as well as to foreign governments.*" (Meyer, Ding, Li, and Zhang, 2014:1006). In comparison with POEs, SOEs (especially for those central-government controlled enterprises) comparatively face more pressures in engaging in SAS FDI strategies and have a lower possibility of doing so. As far as I know, no empirical research has investigated whether different state ownership types (i.e. central-, provincial- and municipal-level government, and private ownership) affect CMNEs' specific FDI strategies, such as resource seeking, strategic asset seeking, market seeking, and efficiency seeking strategies.

3.3 Hypotheses development

Existing research deals less with whether state ownership types determine CMNEs' FDI strategies in which properties. As discussed above, this study mainly discusses whether CMNEs with different state ownership types tend to have different motivations for FDI.

3.3.1 Natural resources seeking

From the lens of resource dependence theory (RDT), firms may use M&As to acquire resources for addressing environmental uncertainty (Pfeffer and Salancik, 1978, 2003). EMNEs likely undertake foreign acquisitions to acquire and secure the stable supply of natural resources (Deng and Yang, 2015; Nicholson and Salaber, 2013). Such natural resources mainly refer to minerals, petroleum, agricultural commodities etc. (Morck et al. 2008). For instance, China National Petroleum Corporation (CNPC) acquired a Canada-based oil firm Petrokazakhstan in 2005 (Wu and Sia, 2002). Existing studies have suggested that one important antecedent of Chinese OFDI is to achieve greater security of access to natural resources (e.g. Buckley et al. 2007; Deng, 2004, 2007; Hong and Sun, 2006; Kang and Jiang, 2012; Li, Newenham-Kahindi, Shapiro, and Chen, 2013; Morck et al., 2008).

Moreover, Kolstad and Wiig (2012) argue that if Chinese investment is directed to seek overseas natural resources it likely reveals political objectives. For example, Chinese SOEs follow home country governments' strategic needs and invest more in natural resource sectors, while POEs have more interests on the target market size and strategic assets of host countries (Amighini, Rabellotti, and Sanfilippo, 2013; Huang and Chi, 2014). SOEs have been regarded as an instrument for reaching national objectives (Zheng and Scase, 2013). In that case, SOEs are relatively required to realize governmental goals as opposed to the profit maximization that most POEs pursue. Under the supervision of the State-owned Assets Supervision and Administration Commission of the State Council (SASAC), China's central SOEs largely focus on the 'strategic' sectors (i.e. energy, transportation, etc.) which are important to the national economy (OECD, 2016). Ramasamy et al. (2012) also provide the strong evidence that Chinese SOEs are more attracted to the host countries which have large endowments of natural resources. For example, CNOOC[16] spent $15.1 billion on the acquisition of

[16] China National Offshore Oil Corporation ('CNOOC') is the largest offshore oil and gas producer in China, which operates directly under the State-owned Assets Supervision and Administration

Nixon (a Canadian oil and gas company) in 2012 and Minmetals[17] acquired OZ Minerals in Australia in 2009 for $1.4 billion (Huang and Chi, 2014).

Additionally, as Song, Yang, and Zhang (2011:39) state, "*managers of SOEs can use overseas investments to demonstrate their ability to manage international business, and claim credit for themselves and their organizations for undertaking activities that serve the national interests.*" However, to what extent do Chinese POEs and SOEs with different state ownership types tend to seek natural resource-driven FDI? In this study I focus on the influence of natural resource dependence on CMNEs. Thus, we hypothesize that:

Hypothesis 1-a: Chinese privately owned MNEs are less likely to acquire target firms in the natural resources sector

Hypothesis 1-b: Chinese MNEs owned by a higher government affiliation level are more likely to acquire target firms in the natural resources sector

Testing these two hypotheses also assists us in responding to the claim of Globerman and Shapiro (2009:173) that "*given the relatively dispersed sources of supply for natural resources, outward FDI from China to this sector would have to be massive indeed to create any real threat of control of supply in the hands of Chinese companies.*"

3.3.2 Technology seeking

In the late 1990s, the Chinese government started to adjust the core technology sourcing policy[18] in place since the 1980s (Gao, 2014), because this technology sourcing policy negatively affected local firms' development of internal technology capabilities.

Commission of the State Council of the People's Republic of China.

[17] Chinese Minmetals Corporation is also supervised by the Chinese central government.

[18] The key technology sourcing policy in China also means Chinese firms at that time can rely on external technology transfer (Gao, 2014).

Government agencies began to promote domestic Chinese innovation by inviting a huge number of experts to join in relevant national science and technology development programs. In 2006, at the National Science and Technology Conference, President Hu Jintao put forward the national strategy of building an innovative nation, which is named the "*2006-2020 National Information Technology Development Strategy*" (Chinese Academy of Sciences, 2006). The following year, the Chinese central government issued an innovative national strategy that led enterprises' future innovation (MOFST[19], 2007). Gross domestic spending on R&D (i.e. % of GDP) increased from 1.369% in 2006 to 2.067% in 2015 (OECD, 2017). Obviously, this national strategy may influence CMNEs' specific FDI strategies.

Specifically, state ownership may affect firms' technology innovation in two ways. First, Yi et al. (2017) argue that the government exerts institutional pressures on firms as a main controlling shareholder. It is a general approach for governments in emerging economies to determine firms' innovation strategies (Mahmood and Rufin, 2005). Second, Chinese governments introduce relevant industrial policies to encourage firms' active investments in innovation and enhance competitiveness in the high-tech sectors (Liu et al. 2011). As such, POEs should better exploit those supportive industrial policies to develop their own innovation strategies and strengthen their competitive positions.

Given the national strategy of promoting indigenous innovation, although Chinese firms controlled by a higher government level are likely under governments' pressure to develop their own national innovation strategy, they will be better able to receive diversified support including finance, technical talents and so on in the mean time. Then Chinese SOEs may comparatively have a lower propensity of acquiring advanced technology from developed countries. Since governments launch supportive industrial innovation policies, POEs should more actively grasp opportunities to acquire

[19] MOFST refers to Ministry of Science and Technology of the People's Republic of China.

advanced technologies. If so, then it is interesting to explore the extent to which different government affiliation levels (i.e. from central government level to private investors or individuals) determine CMNEs' technology-seeking FDI.

However, without addressing the core sources of firm-level competitive advantage, the understanding of EMNEs is more or less incomplete. By using firm level data from the Chinese electronics industry, Bhaumik, Driffield, and Zhou (2016) confirmed that CMNEs derive their advantages from country-level advantages including economies of scale, rather than traditional firm-level advantages such as technology. As mentioned above, Chinese SOEs owned by a higher government affiliation level enjoy the most privileged access to natural resources, financial resources and any other strategic resource, as opposed to POEs. Possessing financial resources can establish a firm's competitive advantages by investing more on R&D, marketing campaigns, and employing skilled talents (Buckley, et al., 2016). For example, owing to government linkages, Chinese SOEs can have preferential access to financial capital and domestic R&D resources (e.g. local universities and research institutions) and hence are less likely to seek foreign strategic assets (Chen, Sun, Tang, and Wu, 2011; Luo, Xue, and Han, 2010).

Moreover, SOEs possess the information advantage for government subsidies via the political communication that enables them achieve more subsidies than Chinese POEs (Wu, 2017). Due to this information advantage, Chinese SOEs can increase their R&D input by obtaining more government subsidies. Observing 193,506 Chinese firms, Yi, Hong, Hsu, and Wang (2017) find a positive relationship between state ownership and the effect of R&D intensity on innovation performance. Despite the fact that there is an increasing number of CMNEs' CBM&As, little empirical research has examined possible linkages between Chinese SOEs and foreign technology-asset-seeking acquisitions.

From the host country perspective, DMNEs may not be willing to sell their technologies to Chinese firms especially to those with higher government involvement. As for Chinese acquirers, government intervention may cause public worries and political sensitivity in the host countries, though their obtaining of government support assists in their competitiveness in M&A deals (Zhang, Zhou, and Ebbers, 2011). Target countries with a higher technological development level may have more concerns about losing core technologies to foreign SOEs (Meyer, Ding, Li and Zhang, 2014). On that account, SOEs may prefer Greenfield investments or acquire targets through lower equity shares (Cui and Jiang, 2012; Meyer, Ding, Li and Zhang, 2014). Furthermore, Wang et al. (2012) highlighted that different government affiliation levels could bring Chinese SOEs' different degrees of institutional pressures therefore affecting their internationalization strategies.

In addition, other scholars also argued that there are regulatory restrictions that the Chinese government exerts on SOEs' OFDI for safeguarding state assets (Cui and Jiang, 2010; Deng, 2004). Namely, little government involvement may facilitate Chinese firms' further growth and success of foreign expansion. For example, Rugman and Li (2007:337) suggest, "*The more promising candidates for successful Chinese MNEs are companies in industries with strong domestic competition and little government intervention and control. These firms are more willing to improve R&D, managerial, and marketing capabilities and to take risks for long term development.*" In the context of market driven efficiency, Chinese SOEs that largely rely on domestic monopoly protection probably may become reluctant to reform and focus on the domestic development of R&D and brand names (Rugman and Li, 2007). Meanwhile, SOEs relatively have to pursue political objectives in their OFDI as they obtain state's financial support (Cui and Jiang, 2012; Morck, Yeung, and Zhao, 2008).

Rugman and Verbeke (2001) identified firm-specific advantage (FSA) flows from home to the target countries, while Rudy et al. (2016) further proposed that SOEs would transfer acquired technology from the host country to the home country to reach the state's purpose. During the 1990s, Chinese SOEs were encouraged to build joint ventures with DMNEs so as to obtain advanced technology (Alon, 2012). Moreover, "*Government involvement and technological resources can also jointly affect EMNEs' ability to expand abroad, either by increasing marginal effects of EMNEs' existing technology or by facilitating new technology acquisition.*" (Wang et al. 2012:662). As such, SOEs can increase their technological base and expand global markets by achieving governmental funding of R&D, patents and other state-owned assets that are not easily available to any other POEs. Also, governments subsidize CMNEs that are affiliated to a higher government affiliation level, engaging in acquiring advanced technology (Wang et al. 2012).

In contrast, if firms do not have relationships with high-level government, they will find it harder to obtain advanced technology abroad. According to Lu et al.'s (2011) survey findings, however, Chinese POEs' own technology-based advantages largely affect their OFDI strategy. The larger Chinese home market has facilitated business survivors developing their own competitive advantages to compete with MNEs that active in China (Lu et al. 2011). More significantly, since POEs can be comparatively free from much political influence, they tend to have a more strategic intent to improve long-term profitability, competitive market position and other strategic assets (Luo, Zhao, Wang, and Xi, 2011), such as technological assets.

Therefore, I may reasonably formulate the following two hypotheses:

Hypothesis 2-a: Chinese privately owned MNEs are more likely to seek foreign technologies in developed countries

Hypothesis 2-b: Chinese MNEs owned by a higher government affiliation level are less likely to seek foreign technologies in developed countries

3.3.3 Brand seeking

Frey et al. (2015) found out that EMNEs (such as Lenovo from China, and Tata Motors from India) are increasingly acquiring foreign established brands. "*Chinese goods are everywhere it seems. But few are name brands and most are associated with being cheap consumer electronics or white goods.*" (Yueh[20], 2014) Many extant studies suggest CMNEs are actively seeking both technologies and brands via CBM&As (Deng, 2009; Luo and Tung, 2007; Rui and Yip, 2008).

It seems surprising that no empirical studies have been sufficiently developed providing a comprehensive analysis of what specific factors determine CMNEs' foreign brand assets seeking strategy. As for brand-related assets, Ramamurti (2012:43) suggested '*how could any firm have global brands to begin with, given that brands are location-bound assets that have to be replicated in each new market?*' Namely, firms may need to acquire foreign brands so as to enter foreign countries' markets. Therefore, following Ramamurti's (2012) assumption may lead to our next question of to what extent do brand assets attract Chinese SOEs or POEs in their course of undertaking OFDI?

Drawn from the previous '*open door*' policy, China's central government is not simply concentrated on attracting inward FDI, but also exporting '*Made-in-China*' goods across the globe (Ding, Akoorie, and Pavlovich, 2009). As discussed above, many scholars have found that SOEs could access to strategic resources that governments provide including state-owned banks' capital support and political support, and they could also maintain a monopolistic position in the domestic market (Amighini et al., 2013; Zou and Adams, 2008). Namely, SOEs have stronger competitive brand positions in the home markets in terms of government's stable support. Specifically, the ownership advantages that EMNEs possess include the familiarity of customer needs in their home market, capacities of operating in an inefficient institutional environment,

[20] A Chief business correspondent from BBC News

capacities of providing products and services with minimal cost and so forth (Cuervo-Cazurra and Genc, 2008). Moreover, one key country-specific advantage that largely facilitate EMNEs' OFDI lies in the economies of scale they benefit from in home markets (Bhaumik et al. 2016). Then, the extent of an EMNEs' own brand recognition in the domestic market is relatively higher than foreign brands. As such, Chinese SOEs are more likely encouraged by the governments to go abroad for developing indigenous brands. In contrast, to address fierce domestic competition, Chinese POEs may be forced to acquire foreign brands.

In terms of government affiliation levels, however, Wang et al. (2012) stated that local governments simply control limited resources available in local regions while central governments control the major parts of core resources available in the whole country. However, this advantage that central SOEs hold may hinder their willingness to uncover their assets to foreign markets. Namely, central-SOEs may be more vulnerable to central governments' intervention. As Walder (1995) contended that, central-SOEs have more responsibility to fulfil social and political objectives. Moreover, governments' demands may carry more weight than customers' needs for SOEs with higher government affiliation level, owing to their heavier reliance on governments for critical resources (Child and Tes, 2001). For instance, Chinese central SOEs (i.e. Sinopec and PetroChina) have more interests in acquiring natural resources such as crude oil, and natural gas to ensure domestic industrial needs and country-level security (Ding, Akoorie, and Pavlovich, 2009). As a consequence, central SOEs may be less likely to achieve foreign brands at the target market.

On the other hand, POEs may encounter discriminatory policies concerning the access to resources in the home market (Kolstad and Wiig, 2012). This domestic context may somewhat prompt POEs to look for foreign markets where there is relatively no policy discrimination (Ramasamy et al. 2012). Moreover, POEs are relatively interdependent with governments and are to a larger degree, driven by their own commercial interests or purposes in the course of internationalization (Child and Rodrigues, 2005; Luo, Xue, and Han, 2010). As a consequence, I may expect that POEs are more than likely to achieve brand-related assets in the target market for foreign market expansion. According to a survey of 632 Chinese POEs, Lu, Liu and Wang (2011) provided the evidence that firms in higher technology-involved industries have a higher likelihood of seeking both advanced technology and internationally known brands. Drawing on case studies by Huang and Chi (2014), Chinese POEs actively acquired foreign firms' technology, distribution channels, and brand names. In 2010, Zhejiang Aokang, a Chinese privately-owned shoe manufacturer, bought an Italian shoe brand, the Valleverde so as to expand local markets (Huang and Chi, 2014).

Recently, an increasing number of Chinese POEs have owned world powerful brands that are ranked on the top 500 Global brand list from 1 in 2009 to 16 in 2017 (as shown in Table 3.3.3.1). Moreover, many well-known Chinese brands (i.e. Alibaba, Tencent, Baidu, and Xiaomi) are also POEs (Cendrowski, 2015).

Table 3.3.3.1 Top 500 Global brand – Chinese firms 1

Year	Top 500 Global brand	Chinese SOEs		Chinese POEs	
	Total	**Number**	**Share**	**Number**	**Share**
2017	53	37	69.81%	16	30.19%
2016	45	32	71.11%	13	28.89%
2015	36	27	75.00%	9	25.00%
2014	29	24	82.76%	5	17.24%
2013	27	22	81.48%	5	18.52%
2012	25	21	84.00%	4	16.00%
2011	18	16	88.89%	2	11.11%
2010	18	15	83.33%	3	16.67%
2009	15	14	93.33%	1	6.67%
2008	11	11	100.00%	0	0.00%

Source: Brand Finance (http://brandirectory.com/)

In terms of industry types, Huang and Chi (2014:396) claimed that '*Most Chinese POEs operate in competitive industries (such as textile, electronics, and machinery) and still are not permitted to operate in many industries where most large SOEs operate (such as oil and gas, power supply, and telecommunications services)*'. In respect to these competitive industries, domestic brand names or trademarks may already take a dominant position in home markets. Therefore, Chinese POEs are more likely to acquire internationally known brands if they want to expand to foreign markets. To illustrate, Cendrowski (2015) suggests that Chinese firms that want to expand to foreign markets may be impeded due to the lack of experiential knowledge in target markets and experience in creating internationally-recognised brands.

Consequently, I could launch a third group of two separated hypotheses:

> ***Hypothesis 3-a: Chinese privately owned MNEs are more than likely to seek foreign brands in developed countries***

> ***Hypothesis 3-b: CMNEs owned by higher-level governments are less likely to seek foreign brands in developed countries***

Above all, since relevant government policies facilitate Chinese POEs' SAS activities (Lu et al. 2011) and governments support Chinese firms' cross-border acquisitions (Xiao and Sun, 2005), then I need to investigate whether SOEs with higher government affiliation are engaging more actively in technology-asset or brand-asset seeking activities. More importantly, existing studies cannot provide us with a clear prediction of whether different government affiliation levels determine CMNEs' brand seeking FDI.

3.4 Data and Methodology

3.4.1 Data collection

EMNEs generally undertake foreign acquisitions to acquire technology and known brands (Deng, 2009; Luo and Tung, 2007; Rui and Yip, 2008; Mutinelli and Piscitello, 1998; Sauvant, 2005). The literature on CMNEs also suggests that acquisition has been the primary mode of entering foreign markets (Nian, 2017; Peng, 2012; Sun et al. 2012). Peng (2012) argues that CBM&As provide an ideal setting for investigation of to what extent state ownership influences CMNEs' OFDI. Consequently, this study focuses on Chinese CBM&As completed between 2006 and 2015, exploring the extent to which government affiliation level influences CMNEs' natural resource seeking and SAS FDI strategies.

The Thomson One Banker (TOB) database provides global M&As which has been widely used by a number of scholars, exploring Chinese MNEs' internationalization (Nicholson and Salaber, 2013; Tao, Liu, Gao, and Xia, 2017; Zhang, Zhou, and Ebbers, 2011). Thus, the first data source about acquisition deals was from the TOB database. After we obtained the target firms and acquirers from TOB database, I matched their names in the Orbis[21] database for achieving further firm-level details including target firms' number of patents and trademarks, and Chinese acquirers' number of patents and trademarks, financial performance, age and ownership information. Orbis has been widely used in International Business research due to its international coverage (Jones and Temouri, 2016). I made 843 valid observations on 486 CMNEs' CBM&As.

3.4.2 Variables

3.4.2.1 Dependent variable

To study natural resources-driven FDI, scholars traditionally use the export share of fuels, ores and metals exports as a proxy of country-level natural resources (e.g. Buckley et al. 2007; Kolstad and Wiig, 2012). Related work also suggests using indices of resource endowments instead of export shares (Brunnschweiler and Bulte, 2008). As noted above, I accessed to the TOB database containing information on CMNEs'

[21] Orbis is a database covering data on over 200 million companies around the world (ORBIS, 2017).

CBM&As. This database can allow us to achieve Standard Industrial Classification (SIC) code with respect to target firms and Chinese acquirers. The first two digits represent the major group. I regarded the Mining (SIC codes between 1000 and 1499) as the main proxy of the natural resources sector (Table 3.4.2.1).

Table 3.4.2.1 Natural resources –details about SIC codes 2

Range of SIC codes-Mining 1000-1499	
SIC code	Industry
1000	Metal Mining
1040	Gold and Silver Ores
1090	Miscellaneous Metal Ores
1220	Bituminous Coal & Lignite Mining
1221	Bituminous Coal & Lignite Surface Mining
1311	Crude Petroleum & Natural Gas
1381	Drilling Oil & Gas Wells
1382	Oil & Gas Field Exploration Services
1389	Oil & Gas Field Services, NEC
1400	Mining & Quarrying of Nonmetallic Minerals (No Fuels)

In this study, a dummy variable (*T_NATURE*) was built whereby '1' refers to the target firm operates in the natural resource sector, '0' if otherwise.

To identify the drivers of SAS orientation, studies using different proxies of strategic assets may provide inconsistent results. For example, Amighini, Rabellotti and Sanfilippo (2013) found that Chinese POEs are attracted by a target country's strategic assets (by using the share of R&D on GDP as a proxy) and Chinese SOEs tend to invest more in the host country's natural resources. Based on survey findings, Lu, Liu and Wang (2011) confirmed that Chinese domestic POEs involved in technology-intensive industries have more intensities of seeking advanced technology, and internationally recognised brands. In contrast, using a number of registered patents and the proportion of technology exports to total exports of the host countries as strategic asset proxy, Ramasamy, Yeung and Laforet (2012) concluded that Chinese SOEs are more likely to acquire strategic assets than POEs. Obviously, scholars commonly consider patents as the main proxy of strategic assets, but fail to add brands into factual measurement.

Notably, Frey et al. (2015) used a number of trademark applications to measure brand assets that EMNEs are increasingly seeking. Thus, a proper way of measuring strategic assets is critically important for studying firms' real determinants of FDI strategies. Equally, I focused on target firms and utilized both their number of patents and trademarks available prior to M&As as proxies of technology and brands respectively.

Therefore, as for the model studying CMNEs' technology-seeking or brand-seeking orientation, I use two dummy variables to measure acquirers' technology (*T_PAT*) and brand seeking (*T_TRADM*) with a value of '1' referring to whether the target firm has at least one patent or trademark, and '0' if otherwise. Also, I use target firms' count of patents (*TNPAT*) prior to M&As as dependent variable. Likewise, target firms' number of trademarks (*TNTRADM*) is seen as another dependent variable for the model studying Chinese MNEs' brand-seeking orientation.

3.4.2.2 Independent variables and other control variables

Wang et al. (2012) argue that government involvement may affect EMNEs' OFDI based on two firm-level dimensions which are their degree of state ownership and government affiliation level respectively. Due to the complicated ownership change and SOE reform occurring over the past two decades, identifying Chinese SOEs itself has not become easier (Yiu, 2011; Zou and Adams, 2008). A number of scholars suggested that the main condition for identifying a SOE is whether the firm's largest shareholder is a state entity (Liang, Ren, and Sun, 2015; Meyer, Ding, Li, and Zhang, 2014; Ramasamy, Yeung, and Laforet, 2012; Wang, Wong, and Xia, 2008). To illustrate, Ramasamy, et al. (2012) classified four types of Chinese firms based on the nature of the majority shareholder, including the state asset management bureau, the State-owned Asset Supervision and Administration Commission (SASAC) controls 157 listed firms which are directly affiliated to the central government, SOEs affiliated to provincial-, municipal-level government, and private firms. As such, I included three dummy variables to represent

Chinese SOEs' different levels of government affiliation: variable *CENG,* '1' refers to central-level government-owned enterprises, and '0' if otherwise; variable *PROG*, '1' refers to CMNEs owned by a provincial government, and '0' if otherwise; variable *CITYG*, '1' refers to CMNEs are owned by municipal-level government or county-level government, and '0' if otherwise.

Also, I used government affiliation level (*GOVAL*) as one core independent variable. Following prior studies (Hong, Wang, Kafouros, 2015; Wang et al. 2012), I also assigned a value to each government affiliation level. To be specific, a value of '3' indicates that the firm is affiliated to the central government; value of '2' denotes that the firm is affiliated to the provincial government, and '1' represents the target firm belongs to the group of municipal or county-level government, and '0' if otherwise.

Zheng et al. (2016) thought that CMNEs' own capacities may critically determine their new SAS strategy. Also, Lu et al. (2011) found that EMNEs should be equipped with related technological capacities to assimilate foreign technologies for ensuring successful SAS FDI. If Chinese acquirers have some competitive brands in the domestic or world markets, they will be less likely to acquire foreign brands. So, I consider acquirers' log-transformed number of patents (*LANPAT*) and trademarks (*LANTRADM*) as explanatory variables, exploring their influence on Chinese MNEs' SAS orientation. Moreover, Wang et al. (2012) stated that firms' age may also determine their FDI as it somewhat reflects experiential knowledge and experience. Hence, in this study I included the firm's age (*LAGE*) as an explanatory variable. It is measured by the number of years available since its establishment (Lu et al. 2011; Huang, Xie, and Reddy, 2017). Longer established firms have a greater propensity to engage in SAS FDI than traditional FDI (Cui, Meyer and Hu, 2014; Xia, Ma, Lu, and Yiu, 2014; Yang et al. 2014). I added firms' profit margin (*PROFIT*) and log-transformed total assets (*LTASSET*) as control variables. Public status *(PUBLIC*), as a control variable, was measured as a dummy variable whereby '1' means the acquirer is a listed company, and '0' if otherwise. In this study I also used the ownership level of acquirers after M&A

deals (*OWNTRANS*) as one of the control variables, exploring whether there are some differences about acquirers' ownership level in between patent seeking and trademark seeking activities.

Specifically, following Hong et al.'s (2015) and Huang et al. (2017)'s approach, I added another two control variables which are the Chinese acquirers' M&A year and industry types that they were involved with. In terms of industry types, I followed Jones and Temouri (2016)'s approach in classifying two-digit NACE industry codes into high technology (*HITECH*), medium technology (*MEDTEC*) and low technology (*LOWTEC*) manufacturing industries, knowledge intensive (*KNINTEN*) and less knowledge intensive (*LEKNIN*) service industries.

3.4.3 Research models

As noted above, I obtained 843 effective CBM&As from 2006 to 2015 by 486 Chinese acquirers. This study used a cross-sectional data set. As for dependent variables, there are two groups: one group is about dummy variables including T_NATURE, T_PAT, and T_TRADM; the second group is about counts of target firms' patents (TNPAT) and trademarks (TNTRADM).

Jones and Temouri (2016) employ a *probit* model identifying the determinants of a tax haven FDI, using dummy variable as the dependent variable that equals '1' if a MNE's subsidiary is located in a tax haven and equals '0' if otherwise. This study aimed to explore the firm-level determinants of CMNEs' natural resource seeking, technology seeking or brand seeking FDI. Thus I also firstly used the *probit* model, seeking to construct a specification from IB theory.

The probability of engaging in natural resources-, patent- or trademark seeking FDI ==

$$\frac{1}{\{1+exp^{-Y}\}}$$

Where

$$\gamma(T\_NATURE_{it}/T\_PAT_{it}/T\_TRADM_{it}) = \beta_0 + \beta_1 \times CENG_{i,t-1} + \beta_2 \times PROG_{i,t-1} + \beta_3 \times CITYG_{i,t-1} + \beta_4 \times BGA_{i,t-1} + \beta_5 \times LAGE_{i,t-1} + \beta_6 \times PROFIT_{i,t-1} + \beta_7 \times LTASSET_{i,t-1} + \beta_8 \times LANPAT_{i,t-1} + \beta_9 \times LANTRADM_{i,t-1} + \beta_{10} \times FEXPE_{i,t-1} + \beta_{11} \times PUBLIC_{i,t-1} + \beta_{12} \times OWNTRANS_{i,t-1} + \beta_{13} \times HITECH_{i,t-1} + \beta_{14} \times MEDTEC_{i,t-1} + \beta_{15} \times LOWTEC_{i,t-1} + \beta_{16} \times KNINTEN_{i,t-1} + \beta_{17} \times LEKNIN_{i,t-1} + \beta_{18} \times DEVOPED_{i,t} + \varepsilon$$

T_NATURE_{it} means the in year t the target firm i was involved in the sector of natural resources. T_PAT_{it} represents the target firm i in year t has at least one patent. T_TRADM_{it} refers to the target firm i in year t has at least one trademark. Except for the variable *DEVOPED*, all other independent variables and control variables were lagged one year prior to M&A year.

In addition, the number of patents or trademarks was both count and discrete variable, which ranges from zero to a certain positive number. It largely has an over-dispersion problem. As for count data regression models, the econometric literature suggests that the Poisson or negative binomial regression model is more appropriate (Cameron and Trivedi, 2013). I therefore selected the negative binomial regression model as a better choice based on likelihood-ratio (LR) test results. Furhermore, I still followed Greene's (2003) suggestion to apply the Vuong test (Vuong, 1989) and then made the final choice between the standard negative binomial regression model and the zero-inflated negative binomial regression model. Since the Vuong Z-scores were insignificant, I finally adopted the negative binomial models. The model equation is displayed below:

$$TNPAT/TNTRADM_{i,t} = \beta_0 + \beta_1 \times CENG_{i,t-1} + \beta_2 \times PROG_{i,t-1} + \beta_3 \times CITYG_{i,t-1} + \beta_4 \times BGA_{i,t-1} + \beta_5 \times LAGE_{i,t-1} + \beta_6 \times PROFIT_{i,t-1} + \beta_7 \times LTASSET_{i,t-1} + \beta_8 \times LANPAT_{i,t-1} + \beta_9 \times LANTRADM_{i,t-1} + \beta_{10} \times FEXPE_{i,t-1} + \beta_{11} \times PUBLIC_{i,t-1} + \beta_{12} \times OWNTRANS_{i,t-1} + \beta_{13} \times HITECH_{i,t-1} + \beta_{14} \times MEDTEC_{i,t-1} + \beta_{15} \times LOWTEC_{i,t-1} + \beta_{16} \times \square NINTEN_{i,t-1} + \beta_{17} \times LEKNIN_{i,t-1} + \beta_{18} \times DEVOPED_{i,t} + \varepsilon$$

$TNTPAT_{it}$ and $TNTRADM_{it}$ represent the number of patents and trademarks respectively that the target firm i has in year t.

3.4.4 Estimations

The existence of heteroscedasticity may result in invalid variance estimation (Goldberger, 1964). Then we introduced the Breusch-Pagan test to identify the problem of heteroscedasticity in a linear regression (Breusch and Pagan, 1979). Since I found thatthe BP test result was significant meaning tgat the heteroscedasticity occurred, the robust standard error analysis in estimations was added. Moreover, I needed to check whether there was a multicollinearity problem in the estimations. The average value of the variance inflation factor (VIF) should be below 10 (Neter, Wasserman and Kutner, 1985; Kutner, Nachtsheim, and Neter, 2004), suggesting that the estimations have no serious multicollinearity problem. Lastly, to better avoid possible endogeneity with the dependent variable in the model, I followed Deng and Yang (2015) to lag all independent variables by one year. For example, I measured Chinese acquirers' absorptive capacity by using the number of patents that they already had prior to M&As.

3.4.5 Robustness checks

As for robustness checks, this study introduced some Instrument-variable (IV) regression models to run estimations. Firms' foreign market seeking can be seen as an endogenous decision due to certain firm characteristics (He, Zhang, and Wang, 2015; Hult, Ketchen, et al. 2008). In this study, the market seeking variable '*DEVOPED*' is likely an endogenous variable. I introduced two instrument variables: the target country's Gross Domestic Product (GDP) and International Property Rights Index (IPRI). Later, I tested whether these two instrumental variables were not significantly correlated with dependent variables. As for dependent variables (*T_NATURE*, *T_PAT* and *T_TRADM*), I ran an *Instrument-variable (IV)probit* model to run data estimations.

As for testing the amounts of patents and trademarks, I further added the IV Two-State Least Squares (2SLS) regression model for robustness tests. For the purpose of solving the over-dispersion problem, I used the IV_GMM regression model. Given the presence of heteroscedasticity, GMM estimation would be more efficient than standard IV regression (Baum, Schaffer, and Stillman, 2003). Moreover, to further observe the influence of firm heterogeneity on the CMNEs' location choices, we followed Wang, et al.'s (2012) approach and split the full sample to two subsamples for robustness checks including developed countries and developing countries.

3.5 Research results

3.5.1 Descriptive analyses

Table 3.5.1.1 describes this study's sample firms' characteristics. There are 486 effective observations of CMNEs, which had completed 843 CBM&As from 2006 to 2015. Specifically, 195 target firms were involved in the sector of natural resources, 177 target firms have patents, and 196 target firms have trademarks. The majority of target firms are located in developed countries, reaching 609 (Table 3.5.1.1).

Table 3.5.1.1 Sample characteristics 3

Acquirers-State ownership types	Number of firms	Number of M&A deals
Chinese Central government owned enterprises	89	248
Chinese Provincial government owned enterprises	29	60
Chinese City-level owned enterprises (County-leve)	81(2)	125
Chinese privately-owned enterprises	287	410
Total	486	843
Target firms		
Target firm in natural resources	195	195
Target firm has one patent at least	177	177
Target firm has one trademark at least	196	196
Target firm located in developed countries	609	609
Target firm located in developing countries	234	234

Table 3.5.1.2 reports matrix pairwise correlations on all relevant variables. I selected a 5 percent confidence level.

Table 3.5.1.2 Matrix pairwise correlations 4

No.	Variables	Obs	Mean	Standard deviation	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	T_NATURE	843	0.2313	0.4219	0	1	1.0000																		
2	T_PAT	843	0.2100	0.4075	0	1	-0.1585*	1.0000																	
3	T_TRADM	843	0.2325	0.4227	0	1	-0.1754*	0.5023*	1.0000																
4	TNPAT	843	470.9514	5602.1270	0	103490	-0.0370	0.1632*	0.1499*	1.0000															
5	TNTRADM	843	6.9953	46.0536	0	819	-0.0147	0.2458*	0.2761*	0.2564*	1.0000														
6	PRIVATE	843	0.4864	0.5001	0	1	-0.3368*	0.1044*	0.1218*	0.0018	0.0088	1.0000													
7	CENG	843	0.2942	0.4559	0	1	0.1274*	-0.0835*	-0.1027*	-0.0374	0.0307	-0.6282*	1.0000												
8	PROG	843	0.0712	0.2573	0	1	0.3733*	-0.1087*	-0.1305*	-0.0233	-0.0416	-0.2694*	-0.1787*	1.0000											
9	CITYG	843	0.1483	0.3556	0	1	0.0403	0.0390	0.0548	0.0622	-0.0216	-0.4060*	-0.2694*	-0.1155*	1.0000										
10	GOVAL	843	1.1732	1.3063	0	3	0.2914*	-0.1197*	-0.1440*	-0.0314	0.0099	-0.8745*	0.9034*	0.1753*	-0.0554	1.0000									
11	BGA	843	0.7556	0.4300	0	1	0.1417*	0.0356	-0.0138	0.0447	0.0474	-0.4850*	0.3429*	0.1145*	0.1596*	0.4476*	1.0000								
12	LAGE	843	2.8046	0.5776	0	5.1059	0.0735*	-0.0652	-0.0558	0.0315	0.0176	-0.2476*	0.2120*	0.0383	0.0487	0.2503*	0.1948*	1.0000							
13	PROFIT	780	8.5092	26.9266	-253	150	-0.1312*	0.0479	0.0463	-0.0071	0.0248	-0.0012	0.0588	-0.0712*	-0.0239	0.0281	0.0462	0.0613	1.0000						
14	LTASSET	798	22.0067	2.6377	10.17	28.861	0.1101*	-0.0322	-0.0190	0.0392	0.0659	-0.4570*	0.4623*	0.0921*	-0.0228	0.5159*	0.4548*	0.2914*	0.2083*	1.0000					
15	LANPAT	843	2.0056	2.8485	0	10.591	0.0336	0.1486*	0.1051*	0.1325*	0.1072*	-0.1314*	0.0296	0.1784*	0.0179	0.1061*	0.1909*	0.1524*	0.0500	0.3370*	1.0000				
16	LANTRADM	843	0.5573	0.9819	0	4.9698	-0.1029*	0.1217*	0.1498*	0.1258*	0.0812*	-0.0146	0.0860*	-0.0802*	-0.0317	0.0498	0.1592*	0.1754*	0.1219*	0.3578*	0.5255*	1.0000			
17	FEXPE	843	0.7331	0.4426	0	1	0.0957*	-0.0050	0.0401	-0.0316	0.0227	-0.1587*	0.1777*	0.0627	-0.0501	0.1971*	0.1873*	0.1062*	0.0381	0.2803*	0.1473*	0.1573*	1.0000		
18	PUBLIC	843	0.5314	0.4993	0	1	-0.1558*	0.0113	-0.0290	-0.0668	0.0434	0.0861*	-0.0772*	-0.0174	-0.0096	-0.0903*	-0.0582	-0.0771*	0.0277	0.0286	0.1016*	0.0299	0.1643*	1.0000	
19	OWNTRANS	843	73.5354	32.8628	10	100	-0.2287*	0.0211	-0.0047	0.0452	-0.0173	0.1529*	-0.1055*	-0.1030*	-0.0053	-0.1524*	-0.0152	0.0045	0.0910*	-0.1407*	-0.0374	0.0262	-0.0652	0.0576	1

Notes: significant at 95% confidence level

3.5.2 Natural resource seeking FDI strategy

Table 3.5.2.1 reports the results of the *probit* regression model for testing the likelihood of natural resource seeking. Models 1-3 test the full sample. Models 4-6 observe target firms that are located in developed countries, and models 7-9 are developed to observe target firms located in developing countries. Model 1 simply adds the PRIVATE variable and model 2 uses CENG, PROG, and CITYG instead of PRIVATE testing the influence of different government affiliation levels on CMNEs' natural resource-seeking FDI. In model 3, we used one categorical variable GOVAL instead. From Model 1 to Model 9, each mean VIF value is less than 3, meaning there was no multicollinearity problem affecting estimations. In Model 1, the PRIVATE variable is negative but significant (-1.2622, $p<0.001$). Then hypothesis 1-a that Chinese POEs are less likely to acquire target firms involved in natural resources can be accepted. In model 2, CENG, PROG, and CITYG are all positive and significant at 1 percent confidence level. GOVAL (0.2594, $p<0.001$) in model 3 is also positive and significant, which indicates that CMNEs affiliated to a higher government level are more likely to seek natural resource endowments. Thus, Hypothesis 1-b can be accepted.

In comparison, these four variables PRIVATE, CENG, PROG, and CITYG achieved consistent results from model 4 to model 9. It means Chinese SOEs are likely to choose both developed countries and developing countries for natural resources seeking FDI.

Additionally, according to models 1-6, OWNTRANS is significant but negatively related to CMNEs' natural resource seeking FDI via foreign M&As. It largely reveals that CMNEs are likely allowed to maintain a smaller ownership percentage if they tend to acquire foreign firms which have natural resources.

Table 3.5.2.1 Probit regression model-natural resource seeking FDI strategy 5

Variables	Model 1 World	Model 2 World	Model 3 World	Model 4 Developed countries	Model 5 Developed countries	Model 6 Developed countries	Model 7 Developing countries	Model 8 Developing countries	Model 9 Developing countries
DEVOPED	0.3350*	0.3493*	0.3757**						
	0.1427	*0.1481*	*0.1394*						
PRIVATE	-1.2622***			-1.3025***			-1.7818***		
	0.1569			*0.1811*			*0.5003*		
CENG		1.0551***			1.0581***			1.8678***	
		0.1792			*0.2179*			*0.4240*	
PROG		2.4444***			2.5507***			3.7881***	
		0.2641			*0.3195*			*0.6418*	
CITYG		1.1003***			1.1923***			1.0653*	
		0.1860			*0.2108*			*0.5358*	
GOVAL			0.2954***			0.3023***			0.4668***
			0.0494			*0.0622*			*0.1144*
BGA	-0.2126	-0.2791	0.1403	0.0855	0.0093	0.4032*	-1.2972*	-1.4034*	-0.6601
	0.2111	*0.2133*	*0.1836*	*0.2367*	*0.2396*	*0.2062*	*0.6523*	*0.5731*	*0.5654*
LAGE	0.0480	0.0754	0.0724	-0.0469	-0.0152	-0.0344	0.2384	0.2938	0.3144
	0.1153	*0.1189*	*0.1139*	*0.1387*	*0.1433*	*0.1375*	*0.2290*	*0.2351*	*0.2092*
PROFIT	-0.0062**	-0.0054**	-0.0059**	-0.0060*	-0.0054+	-0.0064*	-0.0116**	-0.0078+	-0.0098*
	0.0019	*0.0019*	*0.0020*	*0.0030*	*0.0032*	*0.0030*	*0.0040*	*0.0042*	*0.0041*
LTASSET	-0.0166	-0.0030	-0.0146	-0.0512	-0.0304	-0.0500	0.1199	0.0752	0.0845
	0.0310	*0.0337*	*0.0315*	*0.0363*	*0.0405*	*0.0378*	*0.0753*	*0.0772*	*0.0728*
LANPAT	0.0478*	0.0042	0.0613**	0.0461	-0.0066	0.0631*	0.0413	0.0023	0.0676
	0.0233	*0.0247*	*0.0232*	*0.0288*	*0.0302*	*0.0286*	*0.0479*	*0.0553*	*0.0459*

LANTRADM	-0.3210***	-0.2207**	-0.3658***	-0.4443***	-0.3490**	-0.4719***	0.0005	0.1641	-0.1003
	0.0787	*0.0773*	*0.0767*	*0.1013*	*0.1012*	*0.0981*	*0.1872*	*0.1847*	*0.1732*
FEXPE	0.3279*	0.3386*	0.2753+	0.1611	0.1328	0.1267	1.0447*	1.1746**	0.9978*
	0.1555	*0.1643*	*0.1511*	*0.1789*	*0.1867*	*0.1736*	*0.4143*	*0.3983*	*0.4185*
PUBLIC	-0.3698**	-0.3769**	-0.3344**	-0.2007	-0.1963	-0.1592	-0.9067**	-1.0493**	-0.9730**
	0.1243	*0.1287*	*0.1223*	*0.1437*	*0.1511*	*0.1416*	*0.2811*	*0.3160*	*0.2827*
OWNTRANS	-0.0054**	-0.0051**	-0.0058**	-0.0067**	-0.0069**	-0.0067**	-0.0037	-0.0034	-0.0054
	0.0017	*0.0018*	*0.0017*	*0.0021*	*0.0021*	*0.0020*	*0.0040*	*0.0042*	*0.0040*
Constant	0.5650	-0.9314	-0.7362	1.9769*	0.3637	0.7211	-2.9278	-3.8799*	-4.1186*
	0.7901	*0.7847*	*0.7401*	*0.9422*	*0.9297*	*0.8778*	*1.8448*	*1.6839*	*1.6121*
Year control	Included	Included	Included	Included	Included	Included	Included	Included	Included
Observations	780	780	780	563	563	563	217	217	217
Wald chi2	165.84	197.05	149.17	169.72	189.2	145.22	47.84	72.64	48.18
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0003	0.0000	0.0002
Pseudo R2	0.254	0.3019	0.2135	0.292	0.3429	0.2452	0.3421	0.4362	0.3311
Log pseudolikelihood	-308.8558	-289.0194	-325.6018	-225.1276	-208.9313	-239.9997	-59.7174	-51.1727	-60.7111
Mean vif	2.34	2.3	2.37	2.4	2.35	2.42	2.4	2.35	2.42
Correct predictions	80.00%	83.46%	77.05%	79.40%	80.64%	77.09%	88.48%	89.40%	86.64%

Notes: Robust standard error (italic); coefficient (underline); + p<0.10, *p<0.05, **p<0.01, ***P<0.001

Table 3.5.2.2 achieved average marginal effects on models 1-9. The marginal effects of CENG in models 5 and 8 are 0.2269 ($p<0.001$) and 0.2626 ($p<0.001$) respectively, and PROG in models 5 and 8 are 0.6250 ($p<0.001$) and 0.7469 ($p<0.001$) respectively. Thus, I can find that Chinese central government-owned firms and provincial government-owned firms tend to choose developing countries for natural resources seeking as opposed to developed countries. Conversely, Chinese municipal-level government owned firms have higher likelihood of choosing developed countries for natural resource seeking. As discussed above, the market-seeking variable (DEVOPED) may be an endogenous variable. But I found an insignificant result from Wald test on exogeneity and reject the pull hypothesis that DEVOPED is an exogeneous variable.

Table 3.5.2.2 Average marginal effects – natural resource seeking FDI 6

	Model 1-mar	Model 2-mar	Model 3-mar	Model 4-mar	Model 5-mar	Model 6-mar	Model 7-mar	Model 8-mar	Model 9-mar
i.PRIVATE	<u>-0.2770***</u>			<u>-0.2908***</u>			<u>-0.2400***</u>		
	0.0317			*0.0371*			*0.061*		
i.CENG		<u>0.2307***</u>			<u>0.2269***</u>			<u>0.2626***</u>	
		0.0398			*0.0469*			*0.0681*	
i.PROG		<u>0.6521***</u>			<u>0.6250***</u>			<u>0.7469***</u>	
		0.0498			*0.0561*			*0.079*	
i.CITYG		<u>0.2587***</u>			<u>0.2665***</u>			<u>0.1693+</u>	
		0.0448			*0.0463*			*0.1021*	
GOVAL			<u>0.0685***</u>			<u>0.0714***</u>			<u>0.0726***</u>
			0.0113			*0.0143*			*0.0178*

Notes: Robust standard error (italic); coefficient (underline); + P<0.10, * p<0.05, ** p<0.01, *** p<0.001

3.5.3 Technology seeking FDI strategy

Table 3.5.3.1 displays the *probit* regression estimation results on CMNEs' technology seeking FDI. Models 10-12 test the full sample, models 13-15 and models 16-18 test samples regarding target firms located in developed countries and developing countries respectively. In terms of VIF values, there were no multicollinearity problems in estimations. First of all, DEVOPED variables in models 10-12 is all significant and positive, meaning CMNEs are significantly attracted to choosing developed countries for seeking technology. PRIVATE (0.3356, p<0.05) is positively and significantly at 95% confidence level in model 10. In model 13 and model 16, PRIVATE is still positive and significant. The Hypothesis 2-a can be accepted that Chinese POEs are more likely to acquire patents via CBM&As. More importantly, I found that Chinese POEs can go to both developed countries and developing countries for technology-seeking FDI. In Model 11 and model 14, I simply found PROG (-1.3856, p<0.001; -1.3338, p<0.001) is equally significant but negative, and both CENG and CITYG are insignificant. In model GOVAL (-0.1051, p<0.10) in model 12 is negative but significant if I choose a 10 confidence level. GOVAL in model 18 is also negative but significant. It means higher government-affiliated firms are less likely to seek technology-driven FDI. Hence, I may accept Hypothesis 2-b.

In terms of industry factors, Table 3.5.3.1 clearly displays that CMNEs involved in manufacturing industry have a higher likelihood of seeking foreign technologies via M&As.

Table 3.5.3.1 Probit regression model-technology seeking FDI strategy 7

	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18
Variables	**World**	**World**	**World**	**Developed countries**	**Developed countries**	**Developed countries**	**Developing countries**	**Developing countries**	**Developing countries**
DEVOPED	1.1064***	1.1306***	1.0952***						
	0.1619	*0.1657*	*0.1615*						
PRIVATE	0.3356*			0.2797+			1.2323*		
	0.1339			*0.1445*			*0.6089*		
CENG		-0.2208			-0.0542			-1.8815*	
		0.1661			*0.1840*			*0.8654*	
PROG		-1.3856***			-1.3338***			-	
		0.3202			*0.3325*				
CITYG		-0.2275			-0.2403			-0.9024	
		0.1657			*0.1771*			*0.7133*	
GOVAL			-0.1051+			-0.0530			-0.7254*
			0.0562			*0.0618*			*0.3205*
BGA	0.5861**	0.5992***	0.5220**	0.4701*	0.4917**	0.3995*	2.0685**	2.0628**	2.0273***
	0.1689	*0.1688*	*0.1655*	*0.1846*	*0.1859*	*0.1813*	*0.6254*	*0.6197*	*0.5689*
LAGE	-0.1139	-0.1525	-0.1197	-0.1406	-0.1864	-0.1417	-0.4694	-0.5801	-0.6197
	0.1196	*0.1202*	*0.1192*	*0.1308*	*0.1318*	*0.1310*	*0.3826*	*0.4523*	*0.4441*
PROFIT	0.0038	0.0034	0.0040	0.0063*	0.0060+	0.0066*	-0.0019	-0.0027	-0.0031
	0.0025	*0.0025*	*0.0026*	*0.0031*	*0.0031*	*0.0031*	*0.0038*	*0.0036*	*0.0037*
LTASSET	-0.0153	-0.0152	-0.0137	-0.0270	-0.0355	-0.0332	0.0225	0.0749	0.0889
	0.0332	*0.0337*	*0.0338*	*0.0363*	*0.0371*	*0.0370*	*0.0827*	*0.0902*	*0.0890*
LANPAT	0.0571*	0.0788**	0.0537*	0.0670*	0.0958**	0.0656*	-0.0985	-0.1266	-0.1406
	0.0258	*0.0266*	*0.0261*	*0.0277*	*0.0286*	*0.0277*	*0.0938*	*0.1066*	*0.1055*

LANTRADM	0.0665	0.0291	0.0752	0.0786	0.0374	0.0904	-0.3597	-0.3328	-0.2839
	0.0713	*0.0726*	*0.0715*	*0.0777*	*0.0789*	*0.0774*	*0.2561*	*0.2593*	*0.2478*
FEXPE	-0.2527+	-0.2491+	-0.2361+	-0.1939	-0.1948	-0.1885	-0.4134	-0.2167	-0.1830
	0.1372	*0.1377*	*0.1367*	*0.1504*	*0.1522*	*0.1501*	*0.3771*	*0.3725*	*0.4013*
PUBLIC	0.0132	0.0155	0.0050	0.0035	0.0145	0.0075	-0.1313	-0.2091	-0.2915
	0.1181	*0.1204*	*0.1181*	*0.1268*	*0.1304*	*0.1273*	*0.3882*	*0.4204*	*0.3984*
OWNTRANS	-0.0016	-0.0020	-0.0015	-0.0005	-0.0008	-0.0004	-0.0200**	-0.0191*	-0.0187*
	0.0018	*0.0018*	*0.0018*	*0.0019*	*0.0019*	*0.0019*	*0.0075*	*0.0079*	*0.0073*
HITECH	1.0868***	1.1288***	1.0663***	0.8817**	0.9760**	0.9048**	6.7210***	6.5140***	6.3659***
	0.2466	*0.2586*	*0.2485*	*0.2654*	*0.2808*	*0.2681*	*0.8907*	*0.9434*	*0.7204*
MEDTEC	0.6540**	0.7562***	0.6325**	0.6483**	0.8022***	0.6535**	4.4099***	4.4116***	4.2954***
	0.1934	*0.2085*	*0.1963*	*0.2028*	*0.2214*	*0.2060*	*0.9493*	*1.0239*	*0.9259*
LOWTEC	0.8026**	0.8853**	0.7727**	0.8406**	1.0038**	0.8462**	5.0540***	4.7485***	4.5826***
	0.2867	*0.3033*	*0.2897*	*0.3138*	*0.3358*	*0.3172*	*0.9109*	*0.9910*	*0.8453*
KNINTEN	0.2647	0.3234	0.2646	0.1642	0.2554	0.1892	5.0259***	4.7475***	4.5438***
	0.2329	*0.2388*	*0.2336*	*0.2497*	*0.2577*	*0.2500*	*0.7462*	*0.8929*	*0.7191*
LEKNIN	0.2379	0.2648	0.2313	0.2761	0.3312	0.2876	4.1225***	3.7247***	3.5077***
	0.2623	*0.2712*	*0.2649*	*0.2863*	*0.2950*	*0.2874*	*0.7606*	*0.9573*	*0.7757*
Constant	-1.7141*	-1.3913+	-1.3711+	-0.2898	0.0884	0.0500	-5.2670*	-4.4961*	-4.3792*
	0.8532	*0.8366*	*0.8272*	*0.9024*	*0.8928*	*0.8810*	*2.5277*	*2.1443*	*2.1046*
Year control	Included	Included	Included	Included	Included	Included	Included	Included	Included
Observations	780	780	780	563	563	563	118	110	118
Wald chi2	139.32	148.11	135.67	69.8	86.41	66.08	412.88	386.59	413.23
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pesudo R2	0.1763	0.1950	0.1732	0.1124	0.1367	0.1082	0.4149	0.4170	0.4239
Log	-335.8141	-328.1722	-337.0825	-295.776	-287.669	-297.1676	-22.7021	-22.1008	-22.3528

pseudolikelihood									
Mean vif	2.38	2.36	2.41	2.42	2.4	2.45	2.42	2.4	2.45
Correct predictions	80.00%	80.26%	79.36%	74.78%	75.49%	74.60%	91.53%	91.82%	92.37%

Notes: Robust standard error (italic); coefficient (underline); + p<0.10, *p<0.05, **p<0.01, ***P<0.001

Table 3.5.3.2 displays average marginal effects on models 10-18. The marginal effect of PRIVATE (p<0.10) in model 13 is 0.0844, and its marginal effect of PRIVATE in model 16 is 0.0573 (p<0.05). It reveals that Chinese POEs have a higher likelihood of seeking technology in developed countries than in developing countries.

Table 3.5.3.2 Average marginal effects – technology seeking FDI 8

	Model 10-mar	**Model 11-mar**	**Model 12-mar**	**Model 13-mar**	**Model 14-mar**	**Model 15-mar**	**Model 16-mar**	**Model 17-mar**	**Model 18-mar**
i.PRIVATE	0.0822*			0.0844+			0.0573*		
	0.0332			*0.044*			*0.0272*		
i.CENG		-0.051			-0.0156			-0.0457+	
		0.0376			*0.0527*			*0.0234*	
i.PROG		-0.2047***			-0.2572***			-	
		0.0239			*0.0342*			-	
i.CITYG		-0.0509			-0.0663			-0.0317	
		0.0351			*0.0465*			*0.0271*	
GOVAL			-0.0254+			-0.0158			-0.0260*
			0.0135			*0.0184*			*0.012*

Notes: Robust standard error (italic); coefficient (underline); + P<0.10, * p<0.05, ** p<0.01, *** p<0.001

When choosing target firms' amounts of patents as a dependent variable, the negative binomial regression did not achieve a significant result on PRIVATE (Table 3.5.3.3). I still found GOVAL that the variable is negatively and significantly related to CMNEs' amounts of patent seeking (Table 3.5.3.3).

Table 3.5.3.3 Negative binomial regression-technology seeking FDI 9

Variable	Model 19	Model 20	Model 21
	Full sample	Full sample	Full sample
DEVOPED	2.6052***	2.4564***	2.5657***
	0.6110	*0.6194*	*0.5809*
PRIVATE	0.6779		
	0.4849		
CENG		-0.5924	
		0.5090	
PROG		-8.2058***	
		0.8662	
CITYG		0.8937	
		0.7740	
GOVAL			-0.3718*
			0.1661
BGA	1.8118**	2.1018***	1.7875**
	0.6022	*0.5975*	*0.5754*
LAGE	-0.3275	-0.6526	-0.3931
	0.4079	*0.4460*	*0.4031*
PROFIT	-0.0057	-0.0012	-0.0053
	0.0073	*0.0071*	*0.0071*
LTASSET	0.0042	-0.0392	0.0294
	0.0876	*0.0949*	*0.0927*
LANPAT	0.4033***	0.5220***	0.4122***
	0.0842	*0.0868*	*0.0817*
LANTRADM	0.5270*	0.3146	0.4894*
	0.2352	*0.2196*	*0.2310*
FEXPE	-0.7911*	-0.4536	-0.7115+
	0.4031	*0.4212*	*0.3998*
PUBLIC	-0.4140	0.0784	-0.3453
	0.4374	*0.4456*	*0.4473*
OWNTRANS	0.0014	0.0020	0.0019
	0.0057	*0.0060*	*0.0057*
HITECH	1.5216+	1.3863	1.1336
	0.8008	*0.8521*	*0.8583*
MEDTEC	1.8068**	2.1047**	1.5384*

	0.6783	*0.6584*	*0.7172*
LOWTEC	0.0870	-0.3390	-0.3733
	0.9819	*1.0462*	*1.0298*
KNINTEN	-1.4338+	-1.1030	-1.5552*
	0.7369	*0.7107*	*0.7567*
LEKNIN	-0.7412	-0.7452	-0.9829
	0.7997	*0.7473*	*0.8119*
Constant	-2.2374	-0.3830	-1.3675
	2.2419	*2.0678*	*2.0567*
Year control	Included	Included	Included
Observations	780	780	780
Wald chi2	458.71	534.18	459.27
Prob>chi2	0.0000	0.0000	0.0000
Pseudo R2	0.057	0.0668	0.0573
Log pseudolikelihood	-1242.2101	-1229.2747	-1241.765
LR test of alpha=0			
Prob>chibar2	0.0000	0.0000	0.0000
Mean vif	2.38	2.36	2.41
Voung test of zinb vs standard negative binomial (inflate constant)			
z	0.25	0.31	0.66
Pr>z	0.4032	0.3781	0.2541

Notes: LR test shows standard negative binomial regression model is better than possion model; the z scores via voung test are all insignificant, which means standard negative binomial model is appropriate; Robust standard error (italic); coefficient (underline); + p<0.10, *p<0.05, **p<0.01, ***P<0.001

Likewise, the Wald test via the IVprobit regression method proved that DEVOPED is actually an endogenous variable (Table 3.5.3.4). Nevertheless, I found that PRIVATE (0.3029, p<0.05) in model 22 is still positive and significant, indicating that Chinese POEs are more than likely to seek technology seeking FDI, therefore, hypothesis 2-a is strongly supported.

Although I found PROG was negative and significant in model 23, GOVAL in model 24 was not significant. Thus, the hypothesis 2-b cannot be fully accepted. With regards to amount of patent seeking, the IVgmm regression estimations achieved consistent results about the variable of PRIVATE (Table 3.5.3.5). Consequently, my findings strongly supported that Chinese POEs are likely to seek technology-based acquisitions and acquire target firms with greater amounts of patents. Chinese SOEs had no significant inclinations for seeking technology-based acquisitions.

Table 3.5.3.4 IVprobit estimation-technology seeking FDI 10

Variable	Model 22	Model 23	Model 24
DEVOPED	1.8309***	1.8422***	1.8333***
	0.2267	*0.2354*	*0.2261*
PRIVATE	0.3029*		
	0.1297		
CENG		-0.1609	
		0.1623	
PROG		-1.3201***	
		0.3075	
CITYG		-0.2373	
		0.1587	
GOVAL			-0.0807
			0.0544
BGA	0.5189**	0.5438**	0.4507**
	0.1656	*0.1658*	*0.1623*
LAGE	-0.0291	-0.0634	-0.0353
	0.1122	*0.1133*	*0.1119*
PROFIT	0.0048*	0.0045+	0.0050*
	0.0024	*0.0024*	*0.0024*
LTASSET	-0.0098	-0.0136	-0.0109
	0.0326	*0.0334*	*0.0332*
LANPAT	0.0400	0.0614*	0.0373
	0.0248	*0.0253*	*0.0249*
LANTRADM	0.0463	0.0109	0.0557
	0.0675	*0.0682*	*0.0674*
FEXPE	-0.3290*	-0.3317*	-0.3187*
	0.1340	*0.1346*	*0.1333*
PUBLIC	0.1185	0.1261	0.1174
	0.1139	*0.1160*	*0.1138*
OWNTRANS	-0.0023	-0.0028+	-0.0022
	0.0017	*0.0017*	*0.0017*
HITECH	1.1094***	1.1631***	1.1005***
	0.2412	*0.2514*	*0.2418*
MEDTEC	0.6349**	0.7424***	0.6217**
	0.1878	*0.2014*	*0.1900*
LOWTEC	0.8058**	0.8979**	0.7873**
	0.2786	*0.2942*	*0.2822*
KNINTEN	0.2738	0.3365	0.2819
	0.2233	*0.2295*	*0.2233*

LEKNIN	0.3927	0.4160	0.3978
	0.2522	*0.2618*	*0.2541*
Year control	Included	Included	Included
Constant	-2.3365**	-1.9947*	-2.0039*
	0.8268	*0.8170*	*0.8019*
Observations	776	776	776
Wald chi2	191.3	198.09	188.72
Prob>chi2	0.0000	0.0000	0.0000
Log pseudolikelihood	-575.21905	-566.10982	-576.62528
Wald test of exogeneity			
chi2	15.43	13.41	15.98
Prob>chi2	0.0001	0.0003	0.0001
Mean vif	2.42	2.4	2.45

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

Table 3.5.3.5 Ivregress GMM estimation-technology seeking 11

Variable	Model 25	Model 26	Model 27
DEVOPED	1.3262***	1.2587***	1.3174***
	0.2029	*0.1948*	*0.2025*
PRIVATE	0.3354+		
	0.1772		
CENG		-0.2796	
		0.1922	
PROG		-1.1183***	
		0.2175	
CITYG		-0.1454	
		0.2361	
GOVAL			-0.1150+
			0.0635
BGA	0.3448	0.3517*	0.2936+
	0.1546	*0.1525*	*0.1550*
LAGE	0.1034	0.0673	0.0988
	0.1146	*0.1138*	*0.1129*
PROFIT	0.0023	0.0020	0.0024
	0.0018	*0.0017*	*0.0018*
LTASSET	0.0016	0.0020	0.0050
	0.0294	*0.0302*	*0.0304*
LANPAT	0.0813**	0.1011**	0.0776*
	0.0311	*0.0322*	*0.0307*
LANTRADM	0.0645	0.0229	0.0741
	0.0815	*0.0817*	*0.0800*
FEXPE	-0.2394	-0.2345	-0.2281

	0.1573	*0.1540*	*0.1580*
PUBLIC	-0.0734	-0.0933	-0.0797
	0.1234	*0.1258*	*0.1273*
OWNTRANS	-0.0015	-0.0018	-0.0013
	0.0020	*0.0020*	*0.0020*
HITECH	0.6908*	0.6301*	0.6649*
	0.2693	*0.2585*	*0.2647*
MEDTEC	0.4502*	0.4611*	0.4237*
	0.1911	*0.1879*	*0.1907*
LOWTEC	0.5334*	0.5034*	0.5007*
	0.2208	*0.2164*	*0.2193*
KNINTEN	0.0254	0.0157	0.0140
	0.2017	*0.1979*	*0.2004*
LEKNIN	0.2477	0.1767	0.2359
	0.2191	*0.2216*	*0.2202*
Year control	Included	Included	Included
Constant	-1.1761	-0.6929	-0.8603
	0.8232	*0.7421*	*0.7498*
Observations	776	776	776
Wald chi2	92.69	100	90.9
Prob>chi2	0.0000	0.0000	0.0000
R-squared	0.0802	0.1021	0.0804
DWH test			
Robust score chi2	24.7525 (p=0.0000)	23.8391 (p=0.0000)	24.9948 (p=0.0000)
Robust regression F	25.4433 (p=0.0000)	23.3162 (p=0.0000)	25.7205 (p=0.0000)
Test of overidentifying restriction:			
Hansens J chi2	1.11971 (p=0.2900)	0.818907 (p=0.3655)	1.12928 (p=0.2879)
Mean vif	2.42	2.4	2.45

Notes: GMM weight matrix: robust; Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.001

3.5.4 Brand seeking FDI strategy

Table 3.5.4.1 displays *probit* model estimations on CMNEs' likelihood of undertaking brand-seeking FDI. Models 28-30 achieved positive and significant results on PRIVATE, so hypothesis 3-a can be accepted. Based on the comparison between samples that target firms located in developed countries and developing countries respectively, I found that Chinese POEs are more likely to acquire brands of firms from developed countries rather than developing countries. The GOVAL in both model 30 and model 33 is significant but negative. Such results reveal that CMNEs owned by a higher level of government are less likely to seek brand-based acquisitions.

Table 3.5.4.1 Probit regression model-brand seeking FDI strategy 12

	Model 28	Model 29	Model 30	Model 31	Model 32	Model 33	Model 34	Model 35	Model 36
Variables	**World**	**World**	**World**	**Developed countries**	**Developed countries**	**Developed countries**	**Developing countries**	**Developing countries**	**Developing countries**
DEVOPED	0.8019***	0.8185***	0.7921***						
	0.1461	*0.1479*	*0.1456*						
PRIVATE	0.3679**			0.4223**			-0.2630		
	0.1297			*0.1438*			*0.3303*		
CENG		-0.3912*			-0.4262*			0.2784	
		0.1578			*0.1794*			*0.3597*	
PROG		-			-			-	
		-			-			-	
CITYG		-0.1011			-0.1634			0.5095	
		0.1596			*0.1725*			*0.4683*	
GOVAL			-0.1651**			-0.1824**			0.0698
			0.0529			*0.0601*			*0.1127*
BGA	0.1045	0.0897	0.0659	0.1006	0.0869	0.0525	-0.2583	-0.2851	-0.2018
	0.1587	*0.1592*	*0.1547*	*0.1833*	*0.1838*	*0.1781*	*0.3856*	*0.3916*	*0.3720*
LAGE	-0.1194	-0.1695	-0.1221	-0.0608	-0.1190	-0.0638	-0.4658*	-0.5105*	-0.4493+
	0.1045	*0.1059*	*0.1051*	*0.1212*	*0.1225*	*0.1215*	*0.2368*	*0.2407*	*0.2376*
PROFIT	0.0023	0.0020	0.0024	0.0025	0.0023	0.0027	0.0008	0.0001	0.0009
	0.0021	*0.0022*	*0.0021*	*0.0027*	*0.0028*	*0.0027*	*0.0033*	*0.0035*	*0.0033*
LTASSET	0.0110	0.0245	0.0230	0.0019	0.0170	0.0151	0.0483	0.0637	0.0465
	0.0295	*0.0302*	*0.0300*	*0.0340*	*0.0351*	*0.0348*	*0.0683*	*0.0679*	*0.0668*
LANPAT	0.0143	0.0353	0.0087	0.0206	0.0456	0.0142	0.0154	0.0435	0.0162
	0.0252	*0.0261*	*0.0256*	*0.0273*	*0.0285*	*0.0278*	*0.0647*	*0.0682*	*0.0654*

LANTRADM	0.1610*	0.1173+	0.1653*	0.1718*	0.1221	0.1755*	0.0533	-0.0260	0.0437
	0.0656	*0.0676*	*0.0664*	*0.0734*	*0.0758*	*0.0745*	*0.1785*	*0.1876*	*0.1776*
FEXPE	0.0015	0.0298	0.0202	-0.0388	-0.0106	-0.0181	0.1185	0.1741	0.1202
	0.1308	*0.1334*	*0.1311*	*0.1491*	*0.1524*	*0.1496*	*0.3298*	*0.3471*	*0.3274*
PUBLIC	-0.2183+	-0.2578*	-0.2423*	-0.2243+	-0.2749*	-0.2532*	-0.0031	0.0559	-0.0311
	0.1135	*0.1187*	*0.1135*	*0.1258*	*0.1324*	*0.1260*	*0.2980*	*0.3312*	*0.2967*
OWNTRANS	-0.0025	-0.0030+	-0.0026	-0.0015	-0.0019	-0.0016	-0.0064+	-0.0074+	-0.0065+
	0.0017	*0.0017*	*0.0017*	*0.0019*	*0.0019*	*0.0019*	*0.0039*	*0.0040*	*0.0039*
HITECH	0.4626*	0.4126+	0.3968+	0.6004*	0.5915*	0.5432*	-0.0510	-0.2847	-0.0387
	0.2296	*0.2423*	*0.2304*	*0.2603*	*0.2740*	*0.2601*	*0.5660*	*0.6204*	*0.5548*
MEDTEC	0.3376+	0.3807+	0.2778	0.4556*	0.5280*	0.3973+	-0.2796	-0.2958	-0.2674
	0.1883	*0.2081*	*0.1898*	*0.2072*	*0.2301*	*0.2090*	*0.4304*	*0.4801*	*0.4240*
LOWTEC	0.7374**	0.7416*	0.6602*	0.8641**	0.8910**	0.7630*	0.4972	0.4160	0.4983
	0.2726	*0.2941*	*0.2772*	*0.3113*	*0.3330*	*0.3108*	*0.5452*	*0.5651*	*0.5526*
KNINTEN	0.0174	0.0185	-0.0258	0.0744	0.1124	0.0440	-0.0228	-0.1058	-0.0075
	0.2226	*0.2322*	*0.2241*	*0.2426*	*0.2547*	*0.2453*	*0.5276*	*0.5246*	*0.5197*
LEKNIN	0.0536	0.0067	-0.0051	0.1195	0.0912	0.0654	-0.0300	-0.1346	-0.0294
	0.2421	*0.2520*	*0.2424*	*0.2757*	*0.2862*	*0.2762*	*0.5056*	*0.5203*	*0.4980*
Constant	-1.6445*	-1.3766+	-1.3760+	-0.7680	-0.4641	-0.4745	-4.6280**	-5.1960**	-4.8706**
	0.7448	*0.7393*	*0.7222*	*0.8201*	*0.8219*	*0.8022*	*1.5588*	*1.5667*	*1.4665*
Year control	Included	Included	Included	Included	Included	Included	Included	Included	Included
Observations	780	726	780	563	520	563	164	155	164
Wald chi2	88.82	93.37	90.22	60.69	57.71	59.96	663.72	514.03	690.61
Prob>chi2	0.0000	0.0000	0.0000	0.0001	0.0002	0.0001	0.0000	0.0000	0.0000
Pesudo R2	0.1269	0.1346	0.1284	0.0948	0.0953	0.0953	0.1631	0.1848	0.1611
Log	-374.0721	-357.5149	-373.4223	-309.8392	-295.3092	-309.6601	-49.2159	-47.0086	-49.3346

pseudolikelihood									
Mean vif	2.38	2.36	2.41	2.42	2.4	2.45	2.42	2.4	2.45
Correct predictions	77.95%	76.17%	78.72%	73.18%	71.54%	73.00%	88.41%	87.74%	88.41%

Notes: Robust standard error (italic); coefficient (underline); + p<0.10, *p<0.05, **p<0.01, ***P<0.001

Furthermore, based on average marginal effect results, there are a total 10.15% of Chinese POEs significantly involved in overseas brand-driven acquisitions; 13.55% of brand-driven acquisitions occurred in developed countries, and Chinese POEs are less likely to acquire target firms located in developing countries for brand seeking FDI. (Table 3.5.4.2).

Table 3.5.4.2 Average marginal effects – brand seeking FDI 13

	Model 28-mar	Model 29-mar	Model 30-mar	Model 31-mar	Model 32-mar	Model 33-mar	Model 34-mar	Model 35-mar	Model 36-mar
i.PRIVATE	0.1015**			0.1355**			-0.0329		
	0.0359						*0.042*		
i.CENG		-0.0267			-0.0329			0.0692	
		0.0385			*0.0512*			*0.0492*	
i.PROG		-			-			-	
		-			-			-	
i.CITYG		0.032			0.0224			0.1005	
		0.044			*0.0537*			*0.081*	
GOVAL			-0.0446**			-0.0569**			0.0087
			0.014			*0.0183*			*0.014*

Notes: Robust standard error (italic); coefficient (underline); + P<0.10, * p<0.05, ** p<0.01, *** p<0.001

Choosing counts of trademarks as dependent variable enables us to use the negative binomial regression model (Table 3.5.4.3). I found that PRIVATE (0.5739, p<0.10) is positive and significant if selecting a 10 confidence level in model 37. GOVAL in model 39 is not significant, meaning that different government affiliation levels do not significantly determine Chinese SOEs' seeking amounts of brands.

Table 3.5.4.3 Negative binomial regression-brand seeking FDI 14

Variable	Model 37	Model 38	Model 39
	Full sample	Full sample	Full sample
DEVOPED	1.9139***	1.9948***	1.9628***
	0.3597	*0.3538*	*0.3562*
PRIVATE	0.5738+		
	0.3209		
CENG		-0.1824	
		0.3946	
PROG		-31.9155***	
		0.5592	
CITYG		-0.4092	
		0.3590	
GOVAL			-0.0666
			0.1334
BGA	0.5786	0.6487+	0.4232
	0.3793	*0.3742*	*0.3722*
LAGE	-0.2184	-0.2917	-0.2224
	0.2886	*0.2844*	*0.2893*
PROFIT	0.0063	0.0063	0.0077
	0.0056	*0.0056*	*0.0057*
LTASSET	0.1578*	0.1202	0.1208
	0.0768	*0.0827*	*0.0804*
LANPAT	0.1241*	0.1806**	0.1343*
	0.0617	*0.0623*	*0.0614*
LANTRADM	0.2246	0.0943	0.2386
	0.1710	*0.1644*	*0.1723*
FEXPE	-0.1290	-0.0083	-0.0545
	0.3292	*0.3248*	*0.3322*
PUBLIC	-0.7134**	-0.7540**	-0.7010*
	0.2713	*0.2745*	*0.2744*
OWNTRANS	-0.0042	-0.0053	-0.0055
	0.0039	*0.0039*	*0.0040*
HITECH	-0.2477	-0.1219	-0.0722
	0.5906	*0.5933*	*0.5981*

MEDTEC	0.2037	0.4357	0.3283
	0.5774	*0.5842*	*0.5871*
LOWTEC	1.7292*	1.8791**	1.9111**
	0.7073	*0.6974*	*0.7126*
KNINTEN	-0.5431	-0.3988	-0.4878
	0.5762	*0.5725*	*0.5741*
LEKNIN	-1.1726*	-1.0141+	-0.9702
	0.5993	*0.6022*	*0.6118*
Constant	-4.542309	-3.2319+	-3.4323+
	1.9508	*1.9016*	*1.8524*
Year control	Included	Included	Included
Observations	780	780	780
Wald chi2	174.63	9062.21	168.53
Prob>chi2	0.0000	0.0000	0.0000
Pseudo R2	0.0429	0.0597	0.0423
Log pseudolikelihood	-1070.6902	-1051.95	-1071.4132
LR test of alpha=0			
Prob>chibar2	0.0000	0.0000	0.0000
Mean vif	2.38	2.36	2.41
Voung test of zinb vs standard negative binomial (inflate constant)			
z	-2.01	1.42	-1.54
Pr>z	0.9778	0.0775	0.9382

Notes: the likelihood-ratio (LR) tests for over-dispersions (H0:α=0) for the negative binomial models were significant, implying that the Negative binomial models may be more appropriate. Robust standard error (italic); coefficient (underline); + p<0.10, *p<0.05, **p<0.01, ***P<0.001

Likewise, I also used the IVprobit regression method to estimate the likelihood of brand seeking FDI (Table 3.5.4.4). The Wald test of exogeneity achieved a significant result, meaning that DEVOPED is an endogenous variable. Therefore, IV-based regression methods can be better employed to test hypothesis 3-a and hypothesis 3-b. For model 40 I found significant and positive PRIVATE (0.3422, p<0.01), and model 42 I found a significant but negative GOVAL (-0.1383, p<0.01). Therefore, both hypothesis 3-a and hypothesis 3-b can be accepted. IVgmm regression further support hypothesis 3-a and hypothesis 3-b (Table 3.5.4.5).

Table 3.5.4.4 IVprobit estimation-brand seeking 15

Variable	Model 40	Model 41	Model 42
DEVOPED	1.4417***	1.4005***	1.4296***
	0.2235	*0.2287*	*0.2244*
PRIVATE	0.3422**		
	0.1257		
CENG		-0.3199*	
		0.1561	
PROG		-	
		-	
CITYG		-0.1257	
		0.1553	
GOVAL			-0.1383**
			0.0519
BGA	0.0658	0.0646	0.0210
	0.1554	*0.1569*	*0.1515*
LAGE	-0.0546	-0.1073	-0.0586
	0.1038	*0.1058*	*0.1043*
PROFIT	0.0032	0.0028	0.0032
	0.0022	*0.0022*	*0.0022*
LTASSET	0.0148	0.0232	0.0231
	0.0293	*0.0303*	*0.0298*
LANPAT	0.0043	0.0282	0.0001
	0.0247	*0.0255*	*0.0251*
LANTRADM	0.1359*	0.0963	0.1411*
	0.0641	*0.0656*	*0.0646*
FEXPE	-0.0728	-0.0435	-0.0587
	0.1294	*0.1327*	*0.1298*
PUBLIC	-0.1262	-0.1661	-0.1433
	0.1142	*0.1199*	*0.1146*
OWNTRANS	-0.0027+	-0.0031+	-0.0027+
	0.0016	*0.0017*	*0.0016*
HITECH	0.5075*	0.480*	0.4590*
	0.2258	*0.2401*	*0.2271*
MEDTEC	0.3449+	0.4053*	0.2985
	0.1861	*0.2063*	*0.1880*
LOWTEC	0.7801**	0.8056**	0.7203*
	0.2728	*0.2965*	*0.2790*
KNINTEN	0.0452	0.0591	0.0160
	0.2202	*0.2313*	*0.2215*
LEKNIN	0.2026	0.1590	0.1600
	0.2414	*0.2536*	*0.2418*
Year control	Included	Included	Included
Constant	-2.1868**	-1.8540*	-1.9018**

	0.7356	*0.7356*	*0.7149*
Observations	776	723	776
Wald chi2	112.72	110.94	113.57
Prob>chi2	0.0000	0.0000	0.0000
Log pseudolikelihood	-614.42136	-575.6939	-614.36649
Wald test of exogeneity			
chi2	11.65	9.58	11.57
Prob>chi2	0.0006	0.002	0.0007
Mean vif	2.42	2.4	2.45

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

Table 3.5.4.5 IVregress GMM estimation-brand seeking 16

Variable	Model 43	Model 44	Model 45
DEVOPED	0.8742***	0.8309***	0.8670***
	0.1552	*0.1514*	*0.1549*
PRIVATE	0.2608*		
	0.1131		
CENG		-0.2006	
		0.1325	
PROG		-0.8028***	
		0.1300	
CITYG		-0.1638	
		0.1364	
GOVAL			-0.0793+
			0.0437
BGA	0.1531	0.1617	0.1062
	0.1140	*0.1133*	*0.1086*
LAGE	0.0172	-0.0056	0.0128
	0.0746	*0.0739*	*0.0746*
PROFIT	0.0008	0.0006	0.0009
	0.0013	*0.0012*	*0.0013*
LTASSET	0.0239	0.0229	0.0244
	0.0193	*0.0195*	*0.0196*
LANPAT	0.0212	0.0359+	0.0189
	0.0205	*0.0212*	*0.0206*
LANTRADM	0.0804	0.0509	0.0891+
	0.0510	*0.0510*	*0.0504*
FEXPE	-0.0861	-0.0851	-0.0801
	0.0983	*0.0979*	*0.0994*
PUBLIC	-0.1024	-0.1122	-0.1042
	0.0881	*0.0885*	*0.0896*

OWNTRANS	-0.0018	-0.0021	-0.0017
	0.0013	*0.0013*	*0.0013*
HITECH	0.3297*	0.3011+	0.3172+
	0.1659	*0.1664*	*0.1671*
MEDTEC	0.1507	0.1679	0.1364
	0.1222	*0.1241*	*0.1251*
LOWTEC	0.6893**	0.6801**	0.6728**
	0.2194	*0.2211*	*0.2218*
KNINTEN	0.0755	0.0742	0.0741
	0.1319	*0.1320*	*0.1338*
LEKNIN	0.1453	0.1049	0.1428
	0.1429	*0.1444*	*0.1442*
Year control	Included	Included	Included
Constant	-0.9392+	-0.5811	-0.6684
	0.5254	*0.4857*	*0.4870*
Observations	776	776	776
Wald chi2	87.12	110.72	86.97
Prob>chi2	0.0000	0.0000	0.0000
R-squared	0.0746	0.0956	0.0723
DWH test			
Robust score chi2	16.5541	14.8885	16.6596
	(p=0.0000)	(p=0.0001)	(p=0.0000)
Robust regression	18.1246	15.569	18.2628
F	(p=0.0000)	(p=0.0001)	(p=0.0000)
Test of overidentifying restriction:			
Hansens J chi2	1.99474	1.55334	1.99137
	(p=0.1578)	(p=0.2126)	(p=0.1582)
Mean vif	2.42	2.4	2.45

Notes: GMM weight matrix: robust; Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.001

Overall, these findings testified that Chinese POEs have a lower likelihood of seeking natural resources. In contrast, Chinese SOEs with a higher government affiliation have a higher likelihood of seeking natural resources. Moreover, I found that Chinese POEs are more than likely to acquire target firms that have both patents and trademarks. From 2006 to 2015, however, I did not find significant results regarding the relationship between government affiliation level and Chinese SOEs' both technology-seeking and brand- seeking FDI.

3.6 Discussion

In the context of the increasing importance of CMNEs in OFDI (Deng, 2012; Peng, 2012; Ramasamy, et al. 2012; Wang, et al. 2012), this study focused on CMNEs' specific FDI strategies via rapid CBM&As. My results have suggested that all Chinese government-owned enterprises are more likely to acquire target firms that are involved in the natural resources sector, as opposed to both technology-seeking and brand-seeking FDI strategies. In contrast, Chinese POEs have a higher likelihood of seeking foreign technologies and brands via CBM&As. Also, target firms' amounts of patents and trademarks significantly attract Chinese POEs' FDI. In light of location choices, my findings testify that Chinese POEs are likely to choose both developed countries and developing countries for technology-seeking FDI, but only developed countries significantly attract Chinese POEs' brand-seeking FDI.

3.6.1 Theoretical implications

As for MNE theories, research on FDI has traditionally provided a stronger basis (e.g. Buckley and Casson, 1976; Dunning, 1992; Hennart, 1982; Rugman, 1981; Rugman and Verbeke, 2001). Due to the emergence of EMNEs, however, such theories may need further extension (Buckley et al., 2007; Child and Rodrigues, 2005; Cuervo-Cazurra, 2012; Ramasamy, Yeung and Laforet, 2012). The state-owned MNEs' increasing globalization has become a significant and important phenomenon in IB area, yet it has not been paid enough attention to in the EMNE literature (Cuervo-Cazurra, Inkpen et al., 2014).

Peng, Wang, and Jiang (2008:923) argue that "*it is research on emerging economies that has pushed the institution-based view to the cutting edge of strategy research, which is becoming the third leg in the strategy 'tripod' (the other two legs being industry- and resource-based views)*". My findings suggest that Chinese SOEs owned by a higher government affiliation level were neither attracted by target firms' technology- nor brand-based assets, but by natural resource endowments. On the other hand, Chinese POEs have a higher likelihood of seeking both technology- and brand-based assets. The institution-based view (IBV) suggests that national institutions can be regarded as the rules of the game that influence firms' strategies (North, 1990). Thus, my findings firstly contribute to extending the IBV by investigating the role of state ownership type on CMNEs' differing FDI strategies.

Extant research suggests that EMNEs' SAS has been regarded as a catch-up strategy by acquiring DMNEs' ownership advantages (Cuervo-Cazurra and Genc, 2008; Deng, 2009; Mathews, 2006; Rui and Yip, 2008). Moreover, the springboard perspective suggests that EMNEs acquiring strategic assets are not only to maintain competitiveness in developed markets, but also largely for further exploitation in home markets (Luo and Tung, 2007; Ramamurti, 2012). In the period of 2006 and 2015, we found that more than half of Chinese firms' CBM&As (i.e. Chinese SOEs) were less likely to seek technologies and brands. To some extent, the 'late-comer' or 'springboard' perspective is relatively ill-advised to explain Chinese SOEs' increasing FDI. As a consequence, our findings may further testify Cuervo-Cazurra et al.'s (2014) and Peng et al.'s (2016) argument that SOE research can contribute to existing theories regarding MNE literature, especially for EMNE literature. Specifically, SOE research in the context of emerging economies can extend current comprehension of the existence of SOEs with respect to the two logics including market imperfects and political/ideology strategy (Cuervo-Cazurra et al. 2014). To illustrate, this study provided the stronger evidence that Chinese SOEs with three different government affiliation levels are all significantly attracted by target firms' natural resource endowments. Chinese POEs are more significantly involved with SAS acquisitions based on my findings, which largely fit the explanations of the 'springboard' perspective in the aspects of alleviating resource constraints in the home markets.

Moreover, this study concentrating on CMNEs' CBM&As in the past ten years may also contribute to the understanding of the resource-dependence theory (RDT). The core argument of RDT stresses that firms can implement various viable strategies to mitigate external constraints and achieve critical resources through depending on certain environment (Pfeffer and Salncik, 1978, 2003). RDT has been seen as one of the mainstream theoretical logics for exploring the determinants of acquisitions (Hillman et al. 2009). Based on RDT, EMNEs' increasing CBM&As are thought to minimize environmental dependence on host countries by securing strategic resources (Peng, 2012; Rabbiosi, Stefano, and Bertoni, 2012). Deng and Yang (2015) argue that EMNEs' dependence on host countries is affected by the extent to which critical resources that acquires want to possess. My findings show that natural resources carry more weight than strategic assets for Chinese SOEs. In other words, Chinese SOEs' current FDI is largely dependent on target firms' or target countries' natural resource endowments as opposed to strategic assets. Relatively speaking given market imperfects in the emerging economies, Chinese POEs have a large dependence on advanced technologies and known brands. By focusing on the firm-level specific FDI strategies, our findings further contribute to the understanding of the M&A logic from EMNEs' CBM&As.

Drawing from RDT, Deng and Yang (2015) suggest that host country-based factors are likely to have a 'pull' effect on M&As, whereas home country-based factors will have a 'push' effect. Drawing on bundling model by Hennart (2009, 2012), control of some CSAs could assist local firms in obtaining benefits from the monopoly control of these resources. Chinese MNEs that are owned by a higher-level government likely control more monopoly resources. Likewise, I could employ RDT and postulate that having privileged financial treatment in the home country enables Chinese SOEs to go abroad for natural resources-seeking FDI; Given relative resource constraints, Chinese POEs would be pushed to use internationalization as a 'springboard' for acquiring strategic assets they lack in the domestic market. My study rightly supports these arguments and consequently contributes to the understanding of RDT in explaining EMNEs' FDI strategies.

3.6.2 Government affiliation level and differing FDI strategies

Wang et al. (2012) argued that government involvement may exert influence on EMNEs' ability and willingness to internationalize. To illustrate, the influence of a higher government affiliation level being more important, to Chinese firms' OFDI in developed markets; moreover, both state ownership and government affiliation level had no significant influence on Chinese OFDI in developing markets (Wang, et al. 2012). In this study, however, I proved relative sufficient evidence that higher government affiliation more significantly facilitates Chinese SOEs' natural resource-seeking FDI in developing countries via CBM&As. Such improvements on research findings may largely depend on the researchers' choices of dependent variables. Traditionally, a number of related studies used Chinese firms' actual amount of annual OFDI (e.g. Buckley et al. 2007; Hong, et al. 2015; Wang et al. 2012) or counts of Chinese investment projects in target countries (Ramasamy, et al. 2012). This study specifically used different firm-level strategies as dependent variables, following a micro-econometric estimation method.

Prior research also suggests that compared with SOEs, Chinese POEs relatively operate in competitive industries, but are also constrained by resource allocations and lack of government support such as finance to a large extent (Huang and Chi, 2014). Given the different industry contexts in which CMNEs are embedded, CMNEs with different government affiliation levels could be postulated that they are likely pursuing differing FDI strategies. Chinese POEs, as the lowest government affiliation level, may be forced to acquire certain capabilities or resources that make them competitive. For example, Geely, a private car manufacturer from China, acquiring Swedish carmaker Volvo was mainly to strengthen its competitiveness in the domestic markets (Meyer, 2015).

Recently, China's POEs are dominating the 'Go Global' era 4.0[22] in which POEs are

[22] "Go Global" eras (Nian, 2017) by CGTN.COM, affiliated to China Central Television (CCTV), the China's state-controlled media
Since 2001, Chinese enterprises have gone global as a proactive part of the country's opening up

becoming the main driving forces of exploring the global market (Nian, 2017). For example, Dalian Wanda Group, a China's privately owned entertainment conglomerate, acquired the US Hollywood production company 'Legendary Entertainment' in 2016; in the same year, the world's largest coupon website, the Chicago-based Groupon was bought by another privately owned e-commerce giant in China, the Alibaba Group with 33 million shares, which makes Alibaba become its fourth-biggest stakeholder (Nian, 2017). in contrast, Chinese SOEs owned by higher-level governments were suffering more institutional pressure and tended to guarantee governments' political objectives or home country-level security objectives such as investing more in the natural resource sectors. Interestingly, my findings strongly supported these arguments.

Moreover, the 'springboard perspective' suggests that EMNEs use international acquisition to acquire strategic assets they think are lacking in the domestic market (Luo and Tung, 2007). Our findings largely support the hypotheses that I postulated in the beginning that EMNEs with different government affiliation levels may choose distinct SAS strategies or other FDI strategies. However, these findings are somewhat inconsistent with the results of existing studies. For example, Yang and Deng (2017) provided the evidence that government involvement further enhances the main effects of SAS on CMNEs' CBM&As in developed economies. Furthermore, they employed the number of patents in the host country as the proxies of strategic assets. To be specific, we know little about what kind of strategic assets Chinese firms sought via CBM&As based on Yang and Deng (2017)'s empirical findings. Notably, according to Chinese firms' CBM&As between 2006 and 2015, findings revealed that Chinese POEs were more than likely to acquire both foreign technologies (i.e. patents) and brands (i.e. trademarks), while Chinese SOEs with three different government affiliation levels had

strategy.
During "Go Global" era 1.0 over 10 years ago, many Chinese enterprises simply set up sales networks abroad, engaging in low-end international trade.
"Go Global" era 2.0 was dominated by state-owned enterprises that mainly aimed at overseas oil and natural gases, as well as infrastructure projects.
"Go Global" era 3.0 saw Chinese private enterprises begin to rise in foreign markets, with "Made in China" received globally.

lower likelihood of seeking both technologies and brands.

One possible explanation is that the Chinese government was largely encouraging Chinese firms' indigenous innovation, especially for SOEs. Gao (2014:13) has claimed that "*China, and other countries like it, are not satisfied with being developing countries; they want to move forward to join the developed countries. The pursuit of indigenous innovation is part of that effort, and the Chinese government has both the incentive and the capabilities to intervene in the market.*" Meanwhile, as discussed above, Chinese SOEs may their have own unique ownership advantages in accessing various home country resources including financial support (i.e. R&D investment), human resources (i.e. lower labour costs and economies of scale) and so forth, which have probably enabled them to maintain competitive positions and then decreased their tendencies to seek foreign strategic assets. "*However, we must be open to the possibility that EMNEs have different ownership advantages than DMNEs, reflecting the distinctive conditions of their home market*" (Ramamurti, 2012:45).

Another possible explanation is that Chinese SOEs had completed the majority of SAS CBM&As prior to 2006 in which the Chinese government took great efforts in supporting domestic innovation as mentioned above. For example, Chinese state-owned Dalian Machine Tool Group (DMTG) is an obvious example: in 2002, DMTG acquired the Ingersoll Production Systems located in Illinois, United States for its advanced technology and well-known brands (Fey, Nayak, Wu, and Zhou, 2016). However, in this study the M&A data only covers the period between 2006 and 2015.

In addition, Meyer et al. (2014) argued that Chinese SOEs relatively have to address more host country institutional pressures specifically directed at SOEs. Host societies may be worried about foreign acquirers impairing the local economy's competitiveness by exploiting the acquired technology (Globerman and Shapiro, 2009). In that case, Chinese SOEs would be likely to find fewer opportunities to seek strategic assets via CBM&As. SOEs, therefore, are advised to pursue 'low profile strategies' in order to avoid much attention from critical stakeholders (Meyer and Thein, 2014). "*The lower an entrant's profile in terms of media attention, the less likely its legitimacy will be challenged*" (Meyer, Ding, Li and Zhang, 2014:1007). In the factual context of Chinese CBM&As, SOEs do not engage in the deals directly, but continually facilitate via the POEs' foreign subsidiary as a minority shareholder (Guo, Clougherty, and Duso, 2016).

3.6.3 Other influential factors

Interestingly, my findings have shown that firms' prior profit margins are significantly but negatively related to foreign natural resource-seeking FDI strategy. This finding may indicate that CMNEs in the natural resource sector focus on more the accumulation of future natural resource endowments than their own financial performance.

Moreover, my research findings have shown that there is a significant but negative linkage between Chinese acquirers' ownership percentage after M&As and their likelihood of seeking natural resources. Hence, my findings may imply that foreign target firms in the natural resource sector are less likely to allow themselves to lose more ownership control after the M&As. Existing studies provide a relatively limited contribution regarding the relationship between China's general FDI and natural resource seeking FDI (e.g. Buckley et al. 2007; Deng and Yang, 2015; Ramasamy, et al. 2012). My findings therefore further contribute to existing studies.

3.6.4 Methodological contributions on identifying real determinants of Chinese firms' FDI

With respect to natural resource seeking FDI, my findings support that all types of Chinese SOEs significantly tend to acquire target firms that possess natural resources. This study supported Huang and Austin's (2011) claim that Chinese firms' overseas acquisitions in natural resources sector have been largely completed by SOEs. In terms of the methodological aspect, this study may contribute considerably to existing related research.

Using aggregate proxies of natural resources, prior studies achieved mixed results about CMNEs' inclinations of natural resources-seeking FDI (Buckley, et al. 2007; Kang and Jiang, 2012; Ramasamy, Yeung, and Laforet, 2012; Yang and Deng, 2017). In this study my findings can further contribute to existing related research on natural resource seeking FDI. Specifically, prior research found that Chinese outward FDI flow between 1992 and 2001 was significantly and positively associated with host country endowments of natural resources using the ratio of ore and metal exports to other exports as proxy (Buckley et al. 2007). By using the same proxy, Kang and Jiang (2012) found that Chinese firms' FDI (i.e. aggregate FDI stock) were only significantly related to natural resource endowments in developing countries but not in developed countries. Likewise, Kolstad and Wiig (2012) testified that Chinese FDI was simply significantly interested in natural resource endowment (i.e. using the share of fuels, ores and metals) with poor institutions such as non-OECD countries. On the contrary, Chinese firms were found to be likely to conduct CBM&As in the developed countries that are rich in natural resources (i.e. using the same proxy) (Yang and Deng, 2017). In light of firm-level data, this study found that all Chinese SOEs significantly tend to choose both developed and developing countries for acquiring natural resources.

Furthermore, using a host country's exports of ores and minerals as a proxy of natural resources, Ramasamy, Yeung and Laforet (2012) found that Chinese firms including both SOEs and POEs are significantly attracted to natural resource rich countries. Although none of the Chinese POEs in the sample are mining firms, Ramasamy, et al. (2012:24) suggest that "*private companies follow their state-owned counterparts by investing in natural resource rich countries and provide related products and services to the deals already made by their respective governments.*" According to Ramasamy, et al.'s (2012) findings, Chinese POEs were not seeking natural resources, but attracted by the target countries that they can provide complementary services or products since

SOEs have made acquisition deals there. Consequently, it obviously further supports the importance of using micro-level data in studying real determinants of Chinese firms' OFDI and their unique FDI strategies due to firms' differing ownership.

Using annual patent registrations in host countries as proxies of strategic assets, Buckley et al. (2007) did not find significant results regarding the relationship between China's OFDI and strategic asset-seeking FDI. Ramasamy, et al. (2012) achieved inconsistent results with regards to strategic asset seeking FDI by using different proxies of strategic assets. Firstly, they found that Chinese FDI was not significantly attracted to countries for strategic asset seeking FDI if using number of registered patents as a dependent variable; however, they found a positive and significant relationship by using alternate proxy that refers to the exports of high technology products divided by the host country's total exports. In addition, Chinese POEs were not attracted by technical superiority (Ramasamy, et al. 2012).

Moreover, by using number of patents in the host country as proxies of strategic assets, Yang and Deng (2017) found that both government-and non-government-involved Chinese firms are significantly pursuing SAS acquisitions in developed markets. According to in-depth interviews, Huang and Chi (2014) found that Chinese POEs are increasingly pursuing market and strategic asset-seeking OFDI. In this study I gathered stronger evidence that Chinese POEs were more likely to seek strategic assets including both patents and trademarks via CBM&As.

I extended the proxies of strategic assets by factoring in trademarks. Deng and Yang (2015:170) argued that "*as strategic assets also include brands and supplier networks, future studies should include 'brand' or 'marketing skill' measures, which might account for the inconsistent results for our hypothesis of strategic assets.*" As a result, this study considerably contributes to existing related studies. Being consistent with Deng and Yang's (2015) findings regarding macro-level determinants of EMNEs' FDI, I also found that all hypotheses are accepted, but for developing markets hypotheses are only partially accepted. In terms of limitations and future research directions, Deng and Yang (2015) admitted that their research only focuses on the macro-level determinants of CBM&As by EMNEs and suggests more micro-level factors can be explored in future. Specifically, this study, concentrating on micro-level Chinese firms' CBM&As, does further improve Deng and Yang's (2015) empirical research. My findings considerably reveal that identifying firm-level evidence is critically important on studying firms' specific FDI strategies.

Identifying firms' specific FDI strategies could equally be seen as the classification of detailed investment motives. This is critically important for FDI research on studying firms' internationalization performance as Meyer (2015:57) argued that '*the objectives of an action determine how the performance should be assessed*'.

3.7 Conclusion

By observing CMNEs' CBM&As between 2006 and 2015, this study has found the significant role government involvement plays on CMNEs' differing FDI strategies. These empirical results further verify that government involvement critically determines EMNEs' CBM&A decisions (Hurst, 2011; Xia et al. 2014). In short, my findings revealed that SOEs with higher government affiliation level are more likely to acquire target firms involved with natural resource endowments as opposed to technologies and brands. Conversely, and more importantly, I found that Chinese POEs tend to seek for both technology- and brand-based FDI via M&As. On balance, this study largely provides us with a better understanding of CMNEs' specific FDI strategies between Chinese POEs and SOEs with three different government affiliation levels.

Chapter 4: Home country effects and International diversification strategy

4.1 Introduction

> "*Although acquiring unrelated business is not a strategy which fits all companies, the strategy itself is of growing importance in understanding the development of the large and complex business organizations which play such an important role in the economy*" (Leontiades, 1979:41).

In spite of increasing research on outward foreign direct investment (FDI) by emerging-country multinational enterprises (EMNEs), few scholars have studied which potential factors determine EMNEs' international diversification strategy. Du, Lu and Tao (2015) suggest that firms' product market diversification activities have been found to be pervasive in emerging economies including China, India, and Mexico. In contrast, developed-country multinational enterprises (DMNEs) prefer focused strategies rather than corporate diversification strategies (Martin and Sayrak, 2003). This strategic approach can allow DMNEs to exploit their ownership advantages such as technological and brand advantages in emerging markets. Thus, do EMNEs, which largely lack ownership advantages, prefer international diversification strategies to focused strategies?

Earlier scholarship posited that '*labels such as internationalization, geographic diversification, international expansion, globalization, and multinationality tend to refer to the same strategic management construct*' of international diversification (emphasis added) and these terms are used interchangeably (Hitt, Tihanyi, Miller, and Connelly, 2006:832; Sahaym and Nam, 2013:422). There are many practical ways in which firms may diversify internationally including exporting, overseas manufacture, and licensing (Majocchi and Strange, 2012). Yip (1982) suggests that there are two main types of corporate diversification, including internal development and external acquisition. In this study I choose external acquisition as one kind of corporate diversification, focusing on firms' international diversification strategy via cross-border mergers and acquisitions (CBM&As). For example, in the earlier period between 1950 and 1970, an increasing proportion of U.S. companies pursued diversification strategy via acquisition, which resulted in a lower number of single-business companies comprising Fortune 500, from 30% in 1950 to 8% in 1970 (Salter and Weinhold, 1978). Hence, for U.S. companies, acquisition had become a standard approach to diversification and further growth. According to recent news by CGTN[23], "*M&A is the major approach of overseas investment for Chinese enterprises; about 88 percent of over 2,858 agreements by Chinese companies overseas were completed via M&A between 2000 and 2016. [Center for China and Globalization]*" (Nian, 2017). Do CMNEs also seek for international diversification purpose via CBM&As?

This is a particularly relevant question when considering EMNEs, as many theories of EMNE catch-up stress the importance of acquiring strategic assets for the purposes of developing firm-level capabilities (i.e. 'ownership advantages') (Matthews, 2006; Luo and Tung, 2007; Child and Rodrigues, 2005). It is not clear, however, how firms can develop ownership advantages if they require unrelated assets. In such cases, it is hard to see how CMNEs could efficiently integrate and harness acquired unrelated assets. This would suggest that perhaps other motives are in play. The development of large but highly diversified international groups is a strategic direction quite dissimilar to the strategy followed by the largest DMNEs today. These have focused on core businesses, divesting from unrelated activities (which are sub-contracted to larger suppliers) (Nolan, 2012). In spite of the academic '*goldilocks debate*' on the applicability of existing theory or the need for a new theory (Cuervo-Cazurra, 2012), I purposively design a

[23] CGTN refers to China Global Television Network, which is owned by China Central Television or Government of the People's Republic of China.

framework utilizing existing theories to analyze CMNEs' international diversification FDI via CBM&As. I extend and refine the diversification logic by investigating how home country effects (mainly referring to business group affiliation and state ownership types) influence the extent to which CMNEs engage in outward FDI, which can be regarded as a form of diversification in the context of internationalization. Do CMNEs internationally diversify abroad for the same reasons? Are there significant differences regarding the target country destinations of international diversification? To address these questions, I employ a sample of CMNEs' international acquisitions completed between 2006 and 2015.

The findings suggest that business group affiliation is a significant moderator of the private ownership influencing CMNEs' extent of international diversification (i.e. acquiring unrelated businesses). CMNEs owned by higher government affiliation levels are more than likely to acquire unrelated businesses. It is suggested that industry factors have significant influence over the location choices of CMNEs' international diversification strategy. On balance, this study contributes to understanding CMNEs' international diversification strategy in the context of increasing internationalization.

4.2 Literature review

International diversification has been defined as '*a strategy through which a firm expands the sales of its goods or services across the borders of global regions and countries into different geographic locations or markets*' (Hitt, Ireland, and Hoskisson, 2007: 251). Hitt, Tihanyi, Miller, and Connelly (2006) stress that one critical part of the study of international diversification is to discover the antecedents. Lu and Beamish (2004) suggest that International diversification likely brings firms benefits and costs simultaneously.

Diverse benefits drive firms to pursue international diversification including economies of scale (Gaur and Delios, 2015; Hitt, Hoskisson, and Kim, 1997; Kogut, 1985; Wan and Hoskisson, 2003), access to new markets and the opportunity for greater firm growth (Buhner, 1987; Delios and Henisz, 2000; Hitt, Hoskisson, and Kim, 1997), the opportunity to exploit the benefits of internalization (Rugman, 1981; Wan and Hoskisson, 2003), knowledge acquisition (Hisey and Caves, 1985; Hitt, Hoskisson, and Kim, 1997), and the diversification of investment risk across countries (Amit and Livnat, 1988; Boateng and Glaister, 2003; Gaur and Delios, 2015; Wan and Hoskisson, 2003). In contrast, costs rise because MNEs encounter the challenges of operating abroad in an uncertain context (Hymer, 1976). These costs are also referred to as the liability of foreignness (LOF), due to the unfamiliarity of the environment such as cultural, political, and economic differences (Zaheer, 1995).

Further, MNEs need to possess some firm-specific advantages (FSAs) to overcome the LOF and then compete with local incumbents, driving extant MNE theories (Buckley and Casson, 1976; Dunning, 1977; Hennart, 1982). Compared to DMNEs, EMNEs have a relatively lack of the ownership advantages that DMNEs possess such as advanced technologies, known brands (e.g., Luo and Tung, 2007; Mathews, 2006; Rui and Yip, 2008). Given these benefits and costs, what factors may drive EMNEs (i.e. CMNEs) to pursue international diversification strategies?

Table 4.2.1 lists related research on Chinese firms' international diversification.

Table 4.2.1 Key empirical studies on the diversification of Chinese firms 17

Research study	Sample	Underping theories	Dependent variable-measurement of international diversification	Main research findings
Li and Wong, 2003	106 Chinese listed companies in 1996	resource-based view and institution-based view	SIC counts: 1. a related SIC count, which captures the number of four-digit SIC segments within the same major two digit SIC group a firm is engaged in 2. an unrelated SIC count, which captures the number of two-digit groups a company is engaged in	Both resource building and utilization (through concentration and related diversification) and institutional environmental management (through unrelated diversification) are of significant importance for the performance firms from emerging economies but they must be considered together.
Fan, Huang, Oberholzer-Gee, Smith, and Zhao, 2008	58,752 listed companies from nine countries including Brazil, China, France, Germany, India, Italy, Japan, UK, and the USA	unknown	number of business segments	Chinese state-owned enterprises (SOEs) diversify their operations more aggressively than other Chinese firms. China aside, eight other countries' firms have become less diversified over time
Jiang, 2008	895 Chinese listed companies	economic rationality, individual rationality and organizational rationality	Four approaches: 1.N: the number of industries a firm engaged in, 2.HHI: the ratio of revenue from an industry to the total revenue of a firm, 3.EI: it is the opposite of HHI, and 4.DIV: the dummy variable for diversification	The choice of diversification mode is largely based on organizational rationality motivation (to reduce company risks) and individual rationality motivation (in the self-serving interests of the top management); company size, ownership structure, age and industry all have significant effects on degree of diversification

Li, He, Lan, and Yiu, 2012	1,280 Chinese public firms over 2002–2005	resource-based view	1. entropy measure: the share of sales in segment*the weight for each segment; 2. a company's specialization ratio: the fraction of revenues by its largest single four-digit business segment	1. A strong positive relationship between political connections and corporate diversification. 2. The relationship is significantly and positively moderated by the level of state ownership in firms and regional institutional development
Zhou and Delios, 2012	1,186 Chinese listed firms from 1991 to 2002	network theory; institutional theory	six diversification categories: single business, dominant vertical, dominant unrelated, dominant linked, related linked, conglomerate	Chinese listed firms are more likely to diversify into conglomerates if: 1. they occupy a central position in the network; 2. they have higher levels of government shareholding; and 3. The firms with which they have network ties diversify.
Lu, Liu, Filatotchev, and Wright, 2014	1027 Chinese listed firms during 2003–2009 on the Shanghai and Shenzhen Stock Exchanges	knowledge-based view	The extent of firms' investment across countries (the share of investment stock in one country to total investment stock	1. Chinese listed firms' international diversification is positively affected by their domestic industrial and domestic regional diversification. 2. Top management team's prior international experience strengths the impact.
Du, Lu and Tao, 2015	2,798 privately owned enterprises; plus two case studies	resource-based view	Dummy variable: 1 means the firm has investment in more than one industries, and 0 otherwise.	Firms reporting more severe government expropriation are more diversified
Wu, Pangarkar and Wu, 2016	625 Chinese manufacturing multinationals across multiple industries	experiential learning; resource-based view	entropy measure: sales in regional market as a proportion of total overseas sales*the weight to the target region	1. Regional diversification positively and significantly predicts global diversification, and that 2. Firm-specific technology and marketing know-how both increase the likelihood of a firm's moving from regional to global operations.

				3. Technology know-how was found to be more influential than marketing know-how.
Sun, Peng, and Tan, 2017	11,992 firm-year observations on Chinese listed firms between 2001 and 2011	Institutional relatedness	Herfindahl index: sales attributed to foreign region	1. State control during institutional transitions promotes CEOs with political ties to engage in more product diversification; 2. CEOs with international experience institutionalize the power from economic freedom via more international expansion

Notes: *entropy measure: Jacquemin and Berry (1979) developed an entropy diversification measure*

As noted above, Chinese firms' international diversification research is mainly about firms' internal development (Table 4.2.1). No empirical research mentions that CMNEs pursue international diversification by acquiring unrelated businesses abroad. Above Chinese firms' international diversification activities are mainly relevant about internal development (Table 4.2.1).

Moreover, Lu, Liu, Filatotchev, and Wright (2014) found that domestic industrial and domestic regional diversification positively determines Chinese listed firms' international diversification. Do Chinese firms' domestic diversification via M&As also significantly affect their international diversification?

Many scholars identified the significant influence of state ownership on Chinese firms' international diversification activities (Fan, Huang, Oberholzer-Gee, Smith, and Zhao, 2008; Li, He, Lan, and Yiu, 2012; Sun, Peng, and Tan, 2017; Zhou and Delios, 2012). Does state ownership determine CMNEs' international diversification (i.e. degree of unrelatedness) via M&As?

Khanna and Palepu (1997) identified five specific factors in institutional environments, including the product market, capital market, labour market, laws and regulations, and contract enforcement. Comparing with developed economies, these authors argue that in emerging economies the five factors are relatively ineffective, which results in the increasing emergence of conglomerate companies or business groups defined as "*collections of firms bound together in some formal and informal ways*" (Granovetter, 1994:454). These differing characteristics have to be carefully considered while exploring the determinants of EMNEs' international diversification strategies (Khanna and Palepu, 1997). Put simply, specific capacities or resources that EMNEs have accumulated to address specific institutional environments may determine their international diversification strategies. As such, business group affiliation would likely be another critical influential component.

4.3 Hypotheses development

As discussed above, this study is designed to use some specific theories to address EMNEs' international diversification activities. First of all, I apply the resource-based view (RBV) because Chatterjee and Wernerfelt (1991:34) explained that "*a resource-based approach allows us to adopt the perspective of the diversifying firm's managers.*" Drawing on RBV logic, I propose here that both business group affiliation and government affiliation may influence EMNEs' international diversification strategies. More significantly, a substantial body of literature has suggested the importance of studying relatedness in product diversification and international diversification strategy (Barney, 1988; Capar and Kotabe, 2003; Kumar, 2009; Lu and Beamish, 2004; Sakhartov and Folta, 2015). In this study I mainly focus on three important influential factors including the extent of domestic diversification, business group affiliation and government affiliation level.

4.3.1 Domestic diversification and unrelated international diversification

An advantage established by a resource in the home country may not still represent an advantage in other countries (Cuervo- Cazurra, Maloney and Manrakhan, 2007). To illustrate, this is particularly true in emerging economies if firms' competitive advantages are domestically specific, provided that their competitive sources stem from domestic social networks or political ties (Wright, Hoskisson, Filatotchev, and Peng, 2005). Prior to foreign diversification however, firms diversifying businesses in the home market may accumulate valuable experiences and knowledge, competitive advantages and develop teamwork on different levels (Chandler, 1990). For example, domestic diversification likely helps firms develop experiential knowledge about how to reach effects of scope economies and their abilities for integrating business sectors across different countries (Lu, Liu et al. 2014). If firms had completed several deals to acquire unrelated businesses in the domestic market, this domestic diversification would allow them to accumulate certain coordination skills and knowledge in managing an increased diversity of domestic activities. Such skills and knowledge may underpin firms' international diversification. Lu, Liu et al. (2014) identified that Chinese firms' international diversification is positively and significantly influenced by their domestic regional diversification.

From another perspective, Chinese firms may concentrate on economies of scale and acquire the businesses most important for further enlarging market share in the home market; afterwards, they may continually seek for overseas acquisitions of related businesses so as to better exploit their advantages of economies of scale. In that case, Chinese firms' domestic diversification activities would also significantly determine international diversification activities.

"*China offers a great opportunity to investigate the relationship between domestic regional diversification and international diversification.*" (Lu, Liu, Filatotchev, and Wright, 2014:459). Thus, it motivates us to explore whether Chinese firms' domestic diversification activities via M&As also determine their international diversification strategy via CBM&As. Accordingly, I formulate the first hypothesis:

> *Hypothesis 1: The domestic diversification of CMNEs is positively related to their level of international product diversification.*

4.3.2 Business group affiliation and international diversification

Firms that operating in emerging economies have larger scope economies so as to better address institutional voids which largely refer to those conglomerate firms or business groups (Khanna and Palepu, 2000b; Khanna and Rivkin, 2001). One main purpose of

China's economic reform is to build large business groups, which can strengthen reputation and public profile and which could also foster firm-level competitive advantages (Zhou and Delios, 2012). Do these competitive advantages foster the domestic diversification or the international diversification of Chinese business group affiliated firms?

Prior findings reveal that group-affiliated firms are more likely to diversify their operations than independent firms (Chang and Choi, 1988; Khanna and Palepu, 2000a, b; Ramaswamy, Li, and Petitt, 2004). Given institutional voids in emerging economies, much extant literature suggests that business groups would operate well through unrelated diversification (e.g., Khanna and Palepu, 1997; Li and Wong, 2003). Additionally, the form of an unrelated diversified group can leverage the differences across industries and largely spread costs and risks (Ramaswamy, Purkayastha, and Petitt, 2017), which would be more appropriate for firms from emerging economies. In contrast, corporate refocusing strategy, which emphasizes the reduction of business segments and making changes to diversification strategy, is more challenging to implement in emerging economies (Hoskisson, Eden, Lau, and Wright, 2000). Other scholars, who also favor refocusing strategy, contend that business groups' performance has been negatively impacted and that they have tended to be involved in refocusing activities, when emerging economies' institutions have been improved (Hoskisson, Johnson, Tihanyi, and White, 2005).

According to Wan, Hoskisson et al.'s study (2011:1341-1347), 10 of 64 articles mention the significant role of business group affiliation on firms' diversification. This role is more significant for firms from emerging economies including Korea (Chang and Hong, 2000; Chang, Chung, and Mahmood, 2006; Mahmood and Mitchell, 2004), China (Yiu, Lu, Bruton, and Hoskisson, 2007), and other emerging countries. The resource-based view (RBV) suggests that the main determinants of diversification are attributed to the resources that business groups possess, which drive their continued expansion of new markets (Guillen, 2000). Due to relative imperfections in emerging-country institutions, business groups possess advantageous resources compared to independent firms, such as human resources allocation (e.g. Castellacci, 2015; Leff, 1978), and their own internal capital markets (e.g. Carney, Essen, Estrin, and Shapiro, 2017; Chang, Chung, and Mahmood, 2006). Therefore, I propose that business group affiliation significantly influences CMNEs' international diversification strategies. The second hypothesis is as follows:

Hypothesis 2: Business group affiliated firms are more inclined towards unrelated international product diversification.

4.3.3 State ownership types and unrelated international diversification

Contexts and institutions are of critical importance for EMNEs as the benefits they achieve and exploit in international markets are closely related to their domestic contexts and institutions (Cuervo-Cazurra and Genc, 2008; Gaur, Kumar, and Singh, 2014). In China, the institutional forces have more significant effects on CMNEs' internationalization decisions (Buckley et al. 2007). For instance, government endorsement is essential for CMNEs if they want to acquire foreign firms (Deng, 2009).

Drawing on institutional theory, much literature discusses the benefits of unrelated diversification strategies in emerging economies (Chakrabarti, Singh, and Mahmood, 2007; Khanna and Palepu, 1997). Lu and Yao (2006:489) have noted, "*Firms with the dominant state ownership could enjoy government support and incentives, such as favorite conditions, monopolistic positions, or strategic resources, such as capital, business licenses, and information, which are critical to implement diversification strategies.*" Except for the benefits from firms following diversification strategy in emerging economies, do local governments pose pressures on firms' international diversification strategy? Since state ownership has been relatively prevalent in emerging economies in which SOEs have leaded the economic reforms (Peng, 2003; Fan, Huang, Oberholzer-Gee, Smith, and Zhao, 2008), it is problematic to ignore the effects of state ownership on firms' diversification strategy (Xia, Ma, Lu and Yiu, 2014).

As for domestic diversification strategy, many scholars have provided significant supportive evidence that Chinese firms with higher state ownership are more likely to diversify into unrelated business operations (Fan, et al. 2008; Zhou and Delios, 2012). One possible explanation is that Chinese state-owned enterprises (SOEs) may have supportive capital available to them from the government-controlled banks and relevant financial institutions (Buckley et al. 2007). On the other hand, there are also disadvantageous aspects associated with international diversification, including a lack of foreign market knowledge, increased coordination costs (Buckley and Strange, 2011; Hitt, Tihanyi, Miller, and Connelly, 2006; Zaheer, 1995), higher internal transaction costs, the liabilities of foreignness (Hennart, 2007), and additional business risks due to exposure to uncertain environments (Majocchi and Strange, 2012). Given the costs of international diversification, SOEs may follow more inward-looking diversification strategies that support home country investment, as they seem to be more vulnerable to domestic political ties than privately-owned enterprises (POEs) (Vernon, 1979).

A substantial body of empirical literature has noted the role of governments on CMNEs' rapid foreign acquisitions (e.g., Du and Boateng, 2015; Luo, Xue, and Han, 2010; Peng, 2010; Rui and Yip, 2008; Xiao and Sun, 2005). For example, Du and Boateng (2015) found that the government and institutions play a significant role in CMNEs' value creation through CBM&As. Despite the growing body of diversification research, studies examining the state's effects on EMNEs' international product diversification strategy are fairly scant. As a consequence, the third hypothesis is formulated as follows:

> *Hypothesis 3: State ownership types are positively related to the level of CMNEs' international product diversification.*

4.4 Methodology

In this study I explore a slightly different research topic regarding CMNEs' international diversification strategy although employing the same data set on CMNEs' CBM&As in the period between 2006 and 2015.

4.3.1 Data sources and sample

This study mainly relies on two data sources: first of all, the Thomson One Banker (TOB) database enables us to achieve Chinese firms' international M&As. The TOB database includes M&A year, target firms' and acquirers' Standard Industrial Classification (SIC) codes, and ownership level after M&As. Secondly, Orbis database provides us more firm-level information, including both target firms' and Chinese acquirers' age, financial performance, number of patents, trademarks, ultimate owner and so forth. I matched both target firms' and acquirers' company name in both TOB and Orbis databases. Matching as such allows for the collection of firm-level data. I found 486 Chinese acquirers that had completed M&As.

4.3.2 Variables

4.3.2.1 Dependent variable

There are many approaches to measuring the extent of firms' diversification. Jing (2008) used four different approaches to measure international diversification, including (1) the number of industries a firm is engaged in, (2) the ratio of revenue from an industry to the total revenue of a firm, (3) it is the opposite of (2), and (4) the dummy variable for diversification whereby a value of '1' means that the firm is involved in diversification, and a value of '0' indicates the opposite.

Traditionally, SIC codes are used to measure the extent of firms' diversification operations in different industries (Andersen and Kheam, 1998; Pitts and Hopkins, 1982). In this study I followed Caves, Porter, Spence, and Scott's (1980) and Li and Wong's (2003) approaches to measuring the international diversification degree (*Internati_de*) as a dependent variable. I matched target firms' and Chinese acquirers' four digits of SIC codes. I labelled '3' if target's and acquirer's 4 digits of SIC codes are totally different, which can be also referred to as a totally unrelated acquisition; I labelled '2' if both the target and acquirer simply have the same first digit in a four-digit code; I labelled '1' if both of them have the same first two digits in four-digit code; and '0' if otherwise. Table 4.3.2.1 presents target firms' and Chinese acquirers' number of M&As by level of relatedness. The total number of unrelated acquisitions (302) is quite close to the number of related acquisitions (303).

Table 2. Number of M&As by level of relatedness between target firms and Chinese acquirers

Chinese acquirers' industry sector	Number of deals(L-3)		Number of deals(L-2)		Number of deals(L-1)		Number of deals(L-0)	
	Target firms	Acquirers	Target firms	Acquirers	Target firms	Acquirers	Target firms	Acquirers
Agriculture	4	9	1	1	1	0	2	2
Construction	6	7	0	0	0	0	1	1
*Finance	52	58	3	3	0	0	20	20
Manufacturing	**82**	**125**	**60**	**60**	**46**	**43**	**146**	**146**
Mining	63	24	4	4	43	43	73	73
Public Administration	1	3	0	0	0	0	0	0
Retail Trade	4	16	1	0	0	0	4	4
Services	44	15	6	6	0	1	30	30
Transportation	19	24	3	3	0	2	25	25
Wholesale Trade	27	21	1	2	0	1	2	2
Total	302	302	79	79	90	90	303	303

*Notes: *A large proportion of Chinese acquirers involved in Finance sector are affiliated to large business group. They often will set up an investing company when they want to acquire a foreign business. Therefore, I made double check on every acquirer engaged in finance sector and replaced a new SIC code accordingly.*

4.3.2.2 Independent variables

There are three groups of main independent variables for testing three hypotheses, including the degree of home diversification (Homediv_de) (Hypothesis 1), business group affiliation (BGA) (Hypothesis 2), and state ownership types (CENG, PROG, CITYG, and PRIVATE) (Hypothesis 3). Three dummy variables were employed to represent Chinese SOEs' different levels of government affiliation: variable *CENG,* '1' refers to central-level government-owned enterprises, and '0' otherwise; variable *PROG*, '1' refers to CMNEs owned by a provincial government, and '0' otherwise; variable *CITYG*, '1' refers to CMNEs owned by municipal-level government or county-level government, and '0' otherwise. Homediv_de is a categorical variable measured by Chinese acquirers' level of unrelatedness in domestic M&As. This study expected there to be a significant and positive relationship between Chinese firms' domestic diversified acquisitions and their international diversified acquisitions.

4.3.2.3 Control variables

A series of control variables were used. First of all, log-transformed firm age (LAGE) was added as one antecedent of firms' international diversification, following prior research (Gaur and Delios, 2015; Sahaym and Nam, 2013; Sun, Peng, and Tan, 2017; Wu, Pangarkar, and Wu, 2016). A firm may need time to accumulate resource and knowledge so as to alleviate costs related to 'liabilities of foreignness'(LOF) costs (Hymer, 1976). Secondly, financial situation was also seen as the antecedent of international diversification, and then a firm's profit margin (PROFIT) was added (Sahaym and Nam, 2013). Existing literature suggests that one benefit 'economies of scale' may significantly drive firms to pursue international diversification (e.g., Gaur and Delios, 2015; Wan and Hoskisson, 2003). A firm's larger total assets may be correlated with its economies of scale. Then I followed the Sun et al.' (2017) approach and added log-transformed firm's total assets (LTASSET) as another control variable.

Fourthly, Du, Lu and Tao (2015) argue that a firm's physical resources (i.e. patents) and intangible resources (i.e. brand) may encourage firms' diversification decision of stepping into new industries in which their accumulated resources can be exploited. Thus, in this study I added acquirers' log-transformed number of patents (LANPAT) and trademarks (LANTRADM) as control variables. FEXPE refers to firm's international experience, which is a dummy variable whereby '1' means Chinese firms have already owned a foreign subsidiary prior to their M&As, and '0' to indicate otherwise. As discussed above, firms operating abroad may address LOF costs due to unfamiliarity of the environment (Zaheer, 1995). Consequently, a firm's prior international experience may mitigate its diversification risks. Then FEXPE was used as a control variable. Further, unrelated diversification may likely need sufficient financial investment for a longer time (Kochhart and Hitt, 1998). Thus, I added firms' public status (PUBLIC) as a control variable, whereby '1' means it was a publicly listed company before acquiring the target firms, and '0' indicates otherwise (Wu, Pangarkar, and Wu, 2016). I also followed Sun et al.'s (2017) approach and added the industry types that acquirers were involved in as industrial control effects. Lastly, the ownership percentage after M&As (OWNTRANS) is considered as another control variable, predicting its relationship with Chinese firms' international product diversification activities.

4.3.3 Research models

Hisey and Caves (1985) used the probit model to investigate what factors account for U.S. firms' overseas related and unrelated acquisitions. The dependent variable in this study is a categorical variable explaining the degree of unrelatedness between target firms' and Chinese acquirers' industrial sector (i.e. from '0' the most related acquisition to '3' the most unrelated acquisitions). Thus, *ordered probit modelling* was employed.

Drawing from Greene (2012:827), the ordered probit model is established on a latent regression, which can be characterized as follows:

$$y^* = X'\beta + \varepsilon,$$

whereby y* is unobserved and *X'* is the vector of independent variables and control variables as mentioned above. β is the vector of regression coefficients which we want to achieve and estimate. What we can observe is

$$y = 0 \text{ if } y^* \leq 0$$

$$=1 \text{ if } 0<y^*\leq\mu 1$$

$$=2 \text{ if} \mu 1<y^*\leq\mu 2$$

$$=3 \text{ if} \mu 2<y^*\leq\mu 3$$

I consistently used the *probit* model to explore the determinants of Chinese firms' international diversification via totally unrelated acquisitions and related acquisitions.

The probability of engaging in technology-, brand- and natural resources-seeking FDI $== \frac{1}{\{1+exp^{-Y}\}}$

Whereby
$y(/T\_PAT_{it}/T\_TRADM_{it}/T\_NATURE_{it}) = \beta_0 + \beta_1 \times CENG_{i,t-1} + \beta_2 \times PROG_{i,t-1} + \beta_3 \times CITYG_{i,t-1} + \beta_4 \times BGA_{i,t-1} + \beta_5 \times LAGE_{i,t-1} + \beta_6 \times PROFIT_{i,t-1} + \beta_7 \times LTASSET_{i,t-1} + \beta_8 \times LANPAT_{i,t-1} + \beta_9 \times LANTRADM_{i,t-1} + \beta_{10} \times FEXPE_{i,t-1} + \beta_{11} \times PUBLIC_{i,t-1} + \beta_{12} \times OWNTRANS_{i,t-1}$ (if variable *Internatio_de* >2 [unrelated acquisitions]/ *Internatio_de* <1[related acquisitions]) + ε

T_PAT_{it}, as the proxy of technology, represents the target firm i in year t has at least one patent. T_TRADM_{it}, as the proxy of brand, refers to the target firm i in year t has at least one trademark. T_NATURE_{it}, as the proxy of natural resources, means that in year t the target firm i was involved in the natural resources sector.

4.3.4 Estimation

In estimation, heteroscedasticity has to be tested as it may bias variance estimation (Goldberger, 1964). The Breusch-Pagan test is a proper approach to identify the existence of heteroscedasticity (Breusch and Pagan, 1979). If there was heteroscedasticity problem, a robust standard error analysis would be added. Furthermore, the variance inflation factor (VIF) test was also added to address underlying multicollinearity problem.

Notably, all independent variables were lagged one year prior to the M&A year in use. For example, one main independent variable *Homediv_de* refers to Chinese firms' relatedness of diversification in domestic M&As. These sample deals selected had to satisfy one condition that their domestic M&As should occurred prior to international M&As. Additionally, I also used business group affiliation as a moderator variable studying the relationship between private ownership and CMNEs' international diversification. Then, an interactive dummy variable PRIVATE_BG was built and factored into estimations.

4.3.5 Robust analysis

To the best of my knowledge, no empirical research so far suggests whether developed markets or developing markings are a better fit for EMNEs' (including CMNEs') rapid international diversification strategy via M&As. As such, this study split two subsamples including one subsample concerning target firms located in developed countries and another subsample referring to target firms located in developing countries. Given the heterogeneity in firms, subsample estimations may further provide robust research findings.

Apart from dealing with endogeneity problems via lagging variables, endogenous variables have to be treated appropriately. Business groups are largely considered to be more diversified than stand-alone firms (Chang and Choi, 1988; Khanna and Palepu, 2000a, b). Moreover, business groups likely diversify operations domestically before they invest abroad. On that account, the variable business group affiliation *BGA* is potentially an endogenous variable. Then I employed a two-stage model of simultaneous equations to deal with the potential bias. In the first stage, a *probit* regression was used to estimate the probability that a firm is affiliated to a business group as a function of its age, size, ownership, and firm-level capacities or resources. The predicted value derived from the first stage was transformed into a mills ratio 'called' lambda. It was included as a regressor or the correction variable in the second stage model (Heckman, 1979).

4.4 Results

This section mainly contains three parts including a descriptive analysis on variables' pairwise correlations, number of observations, mean, and standard deviation.

4.4.1 Descriptive analysis

Pairwise correlations were made and displayed below (Table 4.4.1.1). The least number of variables' observation reached 721 occupying 91.96% of full observations. The mean industry relatedness in domestic and international M&As is relatively close, at 1.15 and 1.47 respectively (Table 4.4.1.1). Also, independent variables' correlations were lower and significant at 5 percent confidence level.

Table 4.4.1.1 Pairwise correlations 18

		Obs	Mean	Std. Dev.	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Internatio_de	784	1.4719	1.3492	0	3	1														
2	Homediv_de	784	1.1518	1.3808	0	3	0.0883*	1													
3	PRIVATE	784	0.5191	0.5000	0	1	0.0093	-0.2105*	1												
4	BGA	784	0.7398	0.4390	0	1	-0.0662	0.2127*	-0.4777*	1											
5	CENG	784	0.2513	0.4340	0	1	0.0262	0.2900*	-0.6019*	0.3302*	1										
6	PROG	784	0.0753	0.2640	0	1	-0.0604	-0.0454	-0.2964*	0.1251*	-0.1653*	1									
7	CITYG	784	0.1543	0.3615	0	1	-0.0003	-0.024	-0.4439*	0.1729*	-0.2475*	-0.1219*	1								
8	LAGE	784	2.7779	0.5728	0	5.1059	-0.1266*	0.1525*	-0.2256*	0.1889*	0.1704*	0.0599	0.0637	1							
9	PROFIT	721	6.9191	26.2023	-253	150	0.0362	-0.02	0.0526	0.0085	0.001	-0.0668	-0.0254	-0.0171	1						
10	LTASSET	739	21.6736	2.3708	10.166	27.425	-0.0869*	0.2895*	-0.4239*	0.4709*	0.3872*	0.1460*	0.0106	0.2456*	0.1313*	1					
11	LANPAT	784	2.0650	2.9016	0	10.591	-0.1211*	0.1693*	-0.1579*	0.2054*	0.0566	0.1810*	0.0182	0.1602*	0.0537	0.4155*	1				
12	LANTRADM	784	0.5068	0.9540	0	4.9698	-0.0377	0.2028*	0.0318	0.1378*	0.0231	-0.0685	-0.0216	0.1182*	0.0623	0.2973*	0.5543*	1			
13	FEXPE	784	0.7207	0.4490	0	1	0.0387	0.1241*	-0.1383*	0.1815*	0.1313*	0.0806*	-0.0252	0.0888*	0.034	0.2720*	0.1589*	0.1423*	1		
14	PUBLIC	784	0.5293	0.4995	0	1	-0.0263	0.0371	0.0898*	-0.07	-0.1018*	-0.0119	0.0067	-0.1006*	-0.0123	0.0238	0.0816*	0.0183	0.1647*	1	
15	OWNTRANS	784	73.7790	32.9500	10	100	-0.0641	-0.0918*	0.1530*	-0.0221	-0.0946*	-0.1137*	-0.015	-0.0051	0.0722	-0.1316*	-0.047	0.0231	-0.0578	0.0412	1

Notes: significant at 5 percent confidence level

4.4.2 Modelling results

Table 4.4.2.1 presented *ordered probit* modelling results from models 1-10 for testing hypotheses 1-3. Models 1-10 are all significant as per the wald chi square test. Models 1-4 were developed for all samples, while models 5-7 and models 8-10 were separately designed for target firms located in developed markets and developing markets respectively.

Model 1 was a base model without adding industry control variables. Model 2 and model 4 were used to test hypotheses 1-3. Business group affiliation (BGA) was used as a moderator variable on PRIVATE and added in model 3. Instead of using PRIVATE, in model 4, three government affiliation level variables including CENG, PROG, and CITYG were added. From model 1 to model 4, Homediv-de were both significant and positive. The first hypothesis is accepted that CMNEs' domestic diversification is positively associated with international diversification level.

BGA in models 1-2 and 4 are insignificant and it cannot be decided whether or not the second hypothesis can be accepted. However, PRIVATE_BG is a significant moderating variable (0.9485, $p<0.10$), meaning that business group affiliation significantly moderates the relationship between Chinese POEs and their international diversification level. In model 4, three government affiliation level variables are all significant and positive. Consequently, the third hypothesis can be accepted. Namely, the findings showed that Chinese SOEs tend to pursue unrelated international acquisitions.

Table 4.4.2.1 Ordered probit regression models 19

Models	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Variable	World	World	World	World	Developed markets	Developed markets	Developed markets	Developing markets	Developing markets	Developing markets
Homediv_de	0.1185**	0.0984**	0.1022**	0.0972**	0.1130**	0.1191**	0.1103**	0.0758	0.0664	0.0496
	0.0348	*0.0357*	*0.0357*	*0.0357*	*0.0420*	*0.0422*	*0.0422*	*0.0756*	*0.0763*	*0.0757*
PRIVATE	-0.1768	-0.3052*	-1.1985*		-0.4493**	-1.2323*		-0.1131	-5.0817***	
	0.1102	*0.1200*	*0.4853*		*0.1453*	*0.5247*		*0.2686*	*0.5823*	
BGA	-0.0282	-0.0981	-0.9761*	-0.0926	-0.0889	-0.8444	-0.0795	-0.1258	-5.0871***	-0.1026
	0.1357	*0.1421*	*0.4835*	*0.1427*	*0.1747*	*0.5214*	*0.1755*	*0.2722*	*0.5953*	*0.2752*
PRIVATE_BG			0.9485+			0.8432			5.0085***	
			0.4994			*0.5446*			*0.6472*	
CENG				0.3514*			0.5123**			0.3861
				0.1498			*0.1831*			*0.3226*
PROG				0.4361*			0.4830*			0.3994
				0.2038			*0.2411*			*0.4608*
CITYG				0.2328+			0.3972*			-0.4164
				0.1320			*0.1547*			*0.3813*
LAGE	-0.1823+	-0.2001*	-0.1981*	-0.1937*	-0.1699	-0.1697	-0.1687	-0.3553+	-0.3596+	-0.2834
	0.0936	*0.0924*	*0.0924*	*0.0930*	*0.1109*	*0.1105*	*0.1112*	*0.1926*	*0.1927*	*0.2062*
PROFIT	0.0027	0.0019	0.0020	0.0019	0.0031	0.0034	0.0031	-0.0004	-0.0004	-0.0002
	0.0019	*0.0019*	*0.0019*	*0.0019*	*0.0028*	*0.0028*	*0.0028*	*0.0034*	*0.0034*	*0.0035*
LTASSET	-0.0730**	-0.0721*	-0.0708*	-0.0776**	-0.0570+	-0.0548	-0.0636+	-0.09700618	-0.0972+	-0.1215*
	0.0271	*0.0280*	*0.0280*	*0.0293*	*0.0339*	*0.0340*	*0.0359*	*0.0573*	*0.0569*	*0.0587*
LANPAT	-0.0391*	-0.0038	-0.0060	-0.0052	-0.0208	-0.0218	-0.0195	0.0606	0.0511	0.0743

	0.0197	*0.0207*	*0.0208*	*0.0219*	*0.0240*	*0.0241*	*0.0258*	*0.0496*	*0.0509*	*0.0491*
LANTRADM	0.0488	-0.0077	-0.0065	0.0004	0.0679	0.0649	0.0712	-0.2046	-0.1782	-0.2146
	0.0543	*0.0561*	*0.0559*	*0.0570*	*0.0656*	*0.0654*	*0.0665*	*0.1521*	*0.1546*	*0.1580*
FEXPE	0.2490*	0.2990**	0.3065**	0.2945**	0.2412+	0.2446+	0.2348+	0.6792**	0.7023**	0.6463**
	0.1056	*0.1096*	*0.1096*	*0.1097*	*0.1333*	*0.1334*	*0.1337*	*0.2346*	*0.2363*	*0.2387*
PUBLIC	-0.0285	-0.0232	-0.0178	-0.0138	0.0844	0.0855	0.0996	-0.5984*	-0.5741*	-0.5928*
	0.0943	*0.0968*	*0.0967*	*0.0995*	*0.1158*	*0.1157*	*0.1197*	*0.2430*	*0.2441*	*0.2466*
OWNTRANS	-0.0036*	-0.0035*	-0.0034*	-0.0034*	-0.0041*	-0.0040*	-0.0040*	-0.0035	-0.0035	-0.0035
	0.0014	*0.0014*	*0.0014*	*0.0014*	*0.0017*	*0.0017*	*0.0017*	*0.0034*	*0.0034*	*0.0035*
Agriculture		1.0924*	1.1164*	1.0899*	1.2637+	1.3264*	1.2516+	2.0708*	2.0144*	1.9709*
		0.5278	*0.5310*	*0.5256*	*0.6561*	*0.6545*	*0.6548*	*0.9466*	*0.9520*	*0.9194*
Construction		0.3466	0.3546	0.3559	-0.7261	-0.7226	-0.7676	6.3407***	6.3125***	6.3114***
		0.5046	*0.5042*	*0.5064*	*0.7063*	*0.7061*	*0.7182*	*0.5617*	*0.5238*	*0.5190*
Finance		0.3331	0.3083	0.3488	0.0867	0.0578	0.0873	0.7416	0.7211	0.8615+
		0.2761	*0.2777*	*0.2757*	*0.3527*	*0.3545*	*0.3531*	*0.4760*	*0.4765*	*0.4716*
Manufacturing		-0.1341	-0.1420	-0.1174	-0.4813+	-0.4816+	-0.4884+	0.5823	0.5576	0.6675+
		0.2185	*0.2186*	*0.2176*	*0.2732*	*0.2725*	*0.2753*	*0.4040*	*0.4051*	*0.4018*
Mining		-0.6256**	-0.6169*	-0.6358**	-0.8406**	-0.8259**	-0.8637**	-0.6245	-0.6129	-0.6350
		0.2396	*0.2404*	*0.2381*	*0.3015*	*0.3019*	*0.3019*	*0.4667*	*0.4699*	*0.4626*
PublicAdm		0.6814	0.6754	0.7210	0.1394	0.1444	0.1176	5.1677***	5.1598***	5.8996***
		0.6909	*0.6940*	*0.6949*	*0.9577*	*0.9648*	*0.9573*	*0.5077*	*0.5066*	*0.6420*
WholesaleTrade		1.1169**	1.1381**	1.1234**	0.8577*	0.8938*	0.8379+	1.6420*	1.6009*	1.8246**
		0.3504	*0.3492*	*0.3483*	*0.4377*	*0.4381*	*0.4394*	*0.6925*	*0.6872*	*0.6542*
Service		-0.6798*	-0.6704*	-0.6682*	-1.2088**	-1.1827**	-1.2199***	0.1303	0.0908	0.3329
		0.2873	*0.2870*	*0.2868*	*0.3477*	*0.3477*	*0.3489*	*0.5392*	*0.5399*	*0.5526*
RetailT		0.8814*	0.8726*	0.8815*	0.2004	0.1963	0.1730	2.0665**	2.0098**	2.1816**

		0.4373	*0.4337*	*0.4365*	*0.5850*	*0.5794*	*0.5849*	*0.7233*	*0.7268*	*0.7235*
cut1_cons	-2.4372***	-2.8502***	-3.6793***	-2.6004***	-2.3239**	-3.0200**	-1.9742*	-4.1029**	-9.0737***	-4.1282**
	0.6309	*0.7024*	*0.8252*	*0.6826*	*0.8375*	*0.9403*	*0.8149*	*1.4621*	*1.5136*	*1.3990*
cut2_cons	-2.1326***	-2.5252***	-3.3538***	-2.2754***	-1.9036*	-2.5992**	-1.5540	-3.9989**	-8.9693***	-4.0230**
	0.6312	*0.7009*	*0.8238*	*0.6813*	*0.8341*	*0.9370*	*0.8121*	*1.4604*	*1.5116*	*1.3964*
cut3_cons	-1.8656**	-2.2329**	-3.0601***	-1.9829**	-1.5824	-2.2762*	-1.2326	-3.7215*	-8.6904***	-3.7415**
	0.6311	*0.7011*	*0.8232*	*0.6813*	*0.8351*	*0.9368*	*0.8131*	*1.4532*	*1.5048*	*1.3897*
Year control	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Observations	721	721	721	721	528	528	528	193	193	193
Wald chi2	52.48	124.52	130.45	124.83	102.43	106.05	102.17	1394.97	1630.92	1440.85
Prob>chi2	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.0291	0.0729	0.0751	0.0736	0.0817	0.0837	0.082	0.177	0.1802	0.1858
Log pseudolikelihood	-848.1066	-809.779	-807.9244	-809.2227	-604.9545	-603.6294	-604.7261	-163.8041	-163.1797	-162.0556
Mean vif	2.34	2.32	4.03	2.3	2.32	4.03	2.3	2.32	4.03	2.3

Notes: As for Finance industry, I found many acquirers established an investing company as an acquirer. And I had excluded all Banks, Insurance companies and Trust companies.; The degree of international product diversification is the dependent variable; Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.001

Comparing model groups 5-7 and 8-10, Homediv_de is significant and positive in all of the models of the former group, but insignificant in every model of the latter group. It means CMNEs' domestic diversification activities significantly encourage their international diversification activities through acquiring unrelated businesses in developed countries as opposed to developing countries. Likewise, CENG, PROG and CITYG were all found to be significant and positive in model 7 but not model 10. It reflects that Chinese SOEs have a higher likelihood of acquiring unrelated businesses in developed countries.

With respects to industry factors, a subsample analyses provide us with more significant results. First of all, acquirers involved in the agriculture and wholesale Trade sector are more likely to acquire unrelated businesses in both developed and developing countries. Secondly, industry variables such as manufacturing, mining, and services are significantly but negatively related to international diversification level in developed countries. In other words, Chinese acquirers in such industries have a higher likelihood of acquiring related firms from developed countries. On the other hand, Chinese acquirers in construction, public administration, and retail trade are more likely to acquire firms from developing countries for unrelated diversification purpose.

As for other control variables, I find that LAGE is significant but negative in model groups 1-4 and 8-10, meaning that younger Chinese firms are less likely to acquire unrelated foreign businesses from other developing countries. In comparison, the control variable FEXPE is significant and positive related to CMNEs' international product diversification strategy via M&As, showing that CMNEs are more likely to acquire unrelated foreign businesses if they have already had international investment experience. As for ownership control influence, I find that there is a significant relationship on OWNTRANS in models 5-7. This result reflects the fact that CMNEs tend to acquire DMNEs by occupying a smaller ownership percentage for pursuing international product diversification strategy.

For further explanations, average marginal effects on modes 1-10 were estimated and four main variables were mainly reported including Homediv_de, PRIVATE, BGA, PRIVATE_BG, CENG, PROG, and CITYG (Table 4.4.2.2). Marginal effects enabled us to directly explain the coefficients and identify the exact relationship between each independent variable and predicted dependent variable' results in four levels. Specifically, the first level (i.e. predicted outcome is 0) means Chinese acquirers' and target firms' four-digit SIC codes are totally the same or have the same first 3-digit SIC codes at least; the four level (i.e. predicted outcome is 3) means their four-digit SIC codes are totally different. By and large, findings show that these main independent variables are significantly associated with dependent variable's results on both the first level and the fourth level. For example, PRIVATE in model 2 is significantly related to predicted outcome (0) (0.1056, $p<0.05$) and predicted outcome (3) (-0.1005, $p<0.05$). In short, 10.56% of Chinese SOEs tend to acquire target firms in the most related industry.

Moreover, 16.41% of Chinese central-government owned enterprises are more likely to seek unrelated international diversification in developed countries, and 15.83% of Provincial-government owned enterprises and 12.83% of municipal government owned enterprises tend to seek unrelated international diversification in developed countries. There were no significant relationship between CMNEs' higher government affiliation levels and unrelated international diversification in developing countries.

Table 4.4.2.2 Average marginal effects 20

	Model 1-mar	Model 2-mar	Model 3-mar	Model 4-mar	Model 5-mar	Model 6-mar	Model 7-mar	Model 8-mar	Model 9-mar	Model 10-mar
	World	World	World	World	Developed markets	Developed markets	Developed markets	Developing markets	Developing markets	Developing markets
Homediv_degree										
pr outcome(0)	-0.0442***	-0.0342**	-0.0355**	-0.03378**	-0.0388**	-0.0408**	-0.0379**	-0.0221	-0.0193	-0.0142
	0.0127	*0.0123*	*0.0123*	*0.0123*	*0.0143*	*0.0143*	*0.0144*	*0.0219*	*0.0220*	*0.0216*
pr outcome(1)	-0.0008	-0.0004	-0.0004	-0.0004	0.0003	0.0003	0.0002	-0.0004	-0.0003	-0.0002
	0.0006	*0.0005*	*0.0005*	*0.0005*	*0.0007*	*0.0007*	*0.0007*	*0.0004*	*0.0004*	*0.0004*
pr outcome(2)	0.00239**	0.0021*	0.0022*	0.0020*	0.0035*	0.0037*	0.0034*	-0.0002	-0.0002	-0.0002
	0.0009	*0.0008*	*0.0008*	*0.0008*	*0.0014*	*0.0014*	*0.0014*	*0.0005*	*0.0004*	*0.0004*
pr outcome(3)	0.0425**	0.0325**	0.0337**	0.0321**	0.0350**	0.0367**	0.0342**	0.0227	0.0198	0.0146
	0.0122	*0.0118*	*0.0117*	*0.0117*	*0.0130*	*0.0130*	*0.0131*	*0.0225*	*0.0226*	*0.0222*
1.PRIVATE										
pr outcome(0)	0.0658	0.1056*	0.3576***		0.1541**	0.3737**		0.0327	0.4385***	
	0.0409	*0.0409*	*0.1015*		*0.0485*	*0.1140*		*0.0769*	*0.0286*	
pr outcome(1)	0.0011	0.0012	0.0040		-0.0020	-0.0058		0.0006	0.0062+	
	0.0010	*0.0014*	*0.0036*		*0.0030*	*0.0055*		*0.0014*	*0.0032*	
pr outcome(2)	-0.0035	-0.0063*	-0.0147***		-0.0145**	-0.0287***		0.0004	0.0178***	
	0.0024	*0.0028*	*0.0037*		*0.0053*	*0.0058*		*0.0014*	*0.0040*	
pr outcome(3)	-0.0634	-0.1005*	-0.3469**		-0.1377**	-0.3392**		-0.0337	-0.4624***	
	0.0393	*0.0388*	*0.1036*		*0.0427*	*0.1106*		*0.0795*	*0.0290*	
1.BGA										
pr outcome(0)	0.0105	0.0340	0.2887**	0.0320	0.0304	0.2526*	0.0272	0.0366	0.4726***	0.0293
	0.0505	*0.0488*	*0.1059*	*0.0490*	*0.0593*	*0.1229*	*0.0596*	*0.0789*	*0.0276*	*0.0784*

pr outcome(1)	0.0002	0.0006	0.0236	0.0006	0.0001	0.0219	0.0001	0.0006	0.0121+	0.0005
	0.0011	*0.0013*	*0.0183*	*0.0013*	*0.0009*	*0.0257*	*0.0008*	*0.0015*	*0.0063*	*0.0015*
pr outcome(2)	-0.0006	-0.0019	0.0032	-0.0018	-0.0026	-0.0047	-0.0023	0.0005	0.0323***	0.0004
	0.0026	*0.0024*	*0.0133*	*0.0024*	*0.0047*	*0.0119*	*0.0048*	*0.0015*	*0.0063*	*0.0014*
pr outcome(3)	-0.0102	-0.0327	-0.3155*	-0.0308	-0.0279	-0.2699+	-0.0249	-0.0377	-0.5170***	-0.0302
	0.0490	*0.0478*	*0.1366*	*0.0479*	*0.0553*	*0.1594*	*0.0555*	*0.0816*	*0.0284*	*0.0812*
1.PRIVATE_BG										
pr outcome(0)			-0.2806*			-0.2532+			-0.4588***	
			0.1111			*0.1303*			*0.0281*	
pr outcome(1)			-0.0173			-0.0129			-0.0141+	
			0.0138			*0.0162*			*0.0073*	
pr outcome(2)			0.0009			0.0098			-0.0378***	
			0.0096			*0.0063*			*0.0073*	
pr outcome(3)			0.2970*			0.2564+			0.5107***	
			0.1335			*0.1512*			*0.0288*	
1.CENG										
pr outcome(0)				-0.1196*			-0.1698**			-0.1081
				0.0490			*0.0565*			*0.0865*
pr outcome(1)				-0.0040			-0.0054			-0.0024
				0.0031			*0.0049*			*0.0027*
pr outcome(2)				0.0050**			0.0110**			-0.0030
				0.0018			*0.0033*			*0.0046*
pr outcome(3)				0.1186*			0.1641**			0.1135
				0.0507			*0.0585*			*0.0929*
1.PROG										
pr outcome(0)				-0.1431*			-0.1562*			-0.1083

	0.0615	*0.0715*	*0.1167*
pr outcome(1)	-0.0086	-0.0093	-0.0030
	0.0070	*0.0095*	*0.0046*
pr outcome(2)	0.0027	0.0072**	-0.0048
	0.0024	*0.0024*	*0.0093*
pr outcome(3)	0.1490*	0.1583*	0.1160
	0.0699	*0.0808*	*0.1300*
1.CITYG			
pr outcome(0)	-0.0793+	-0.1324**	0.1230
	0.0439	*0.0492*	*0.1153*
pr outcome(1)	-0.0026	-0.0045	0.0006
	0.0024	*0.0041*	*0.0012*
pr outcome(2)	0.0034*	0.0086**	-0.0023
	0.0015	*0.0029*	*0.0061*
pr outcome(3)	0.0785+	0.1283*	-0.1213
	0.0449	*0.0505*	*0.1090*

Notes: ‘i’ refers to the variable is a dummy variable;

1._predict: Pr (InternationalDiv==0), predict (pr outcome(0));

2. _predict: Pr (InternationalDiv==1), predict (pr outcome(1));

3. _predict: Pr(InternationalDiv==2), predict(pr outcome(2));

4. _predict: Pr(InternationalDiv==3), predict(pr outcome(3));

0-3 refers to Chinese firms acquired the foreign firms from the most related level to the most unrelated level; Robust standard error (italic); coefficient (underline);

+P<0.10, *p<0.05, **p<0.01, ***p<0.001

Figure 4.2.2.1-4.2.2.3 clearly display these relationships between independent variables (i.e. Homediv_de, PRIVATE, BGA, CENG, PROG, and CITYG) and the dependent variable's four different predicted outcomes.

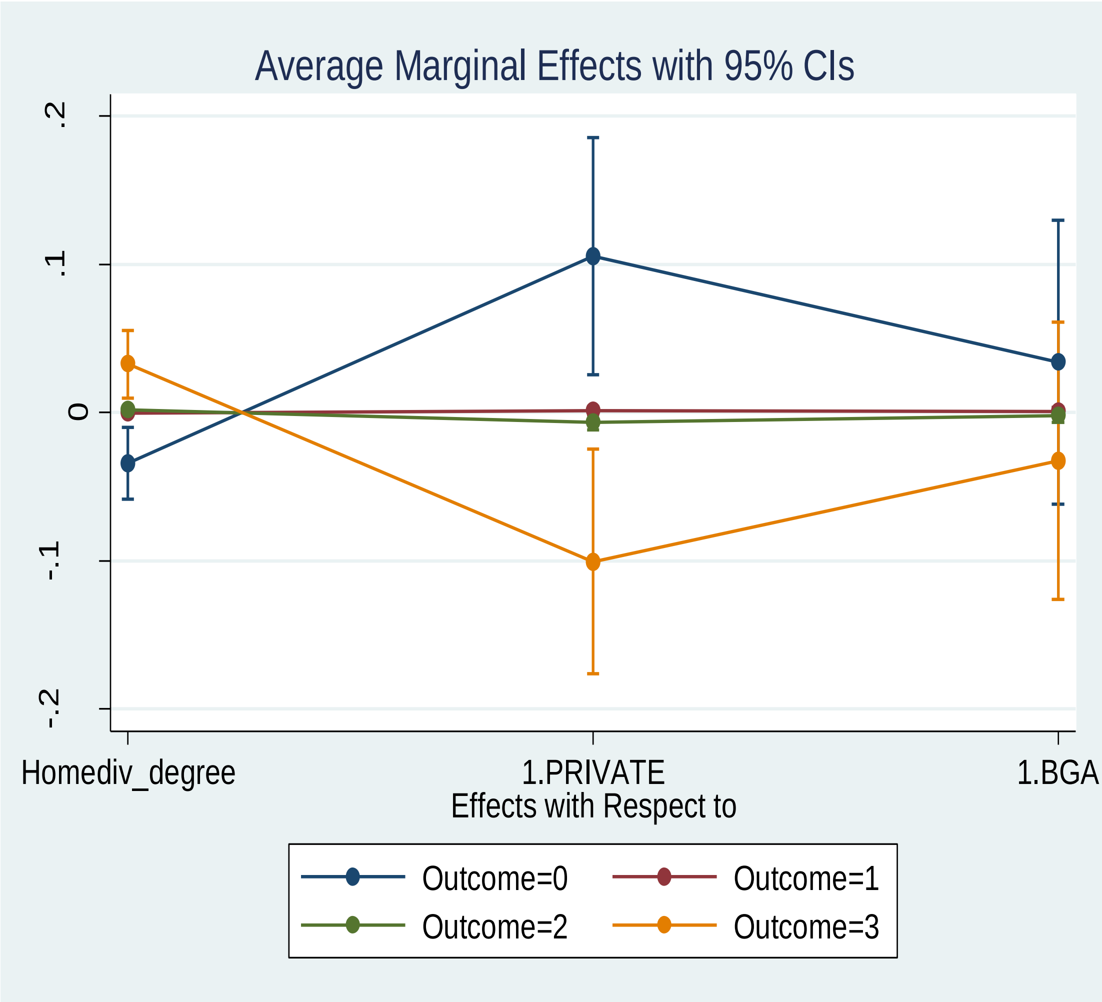


Figure 4.2.2.1 Average marginal effects – home diversification, private ownership, and business group affiliation 5

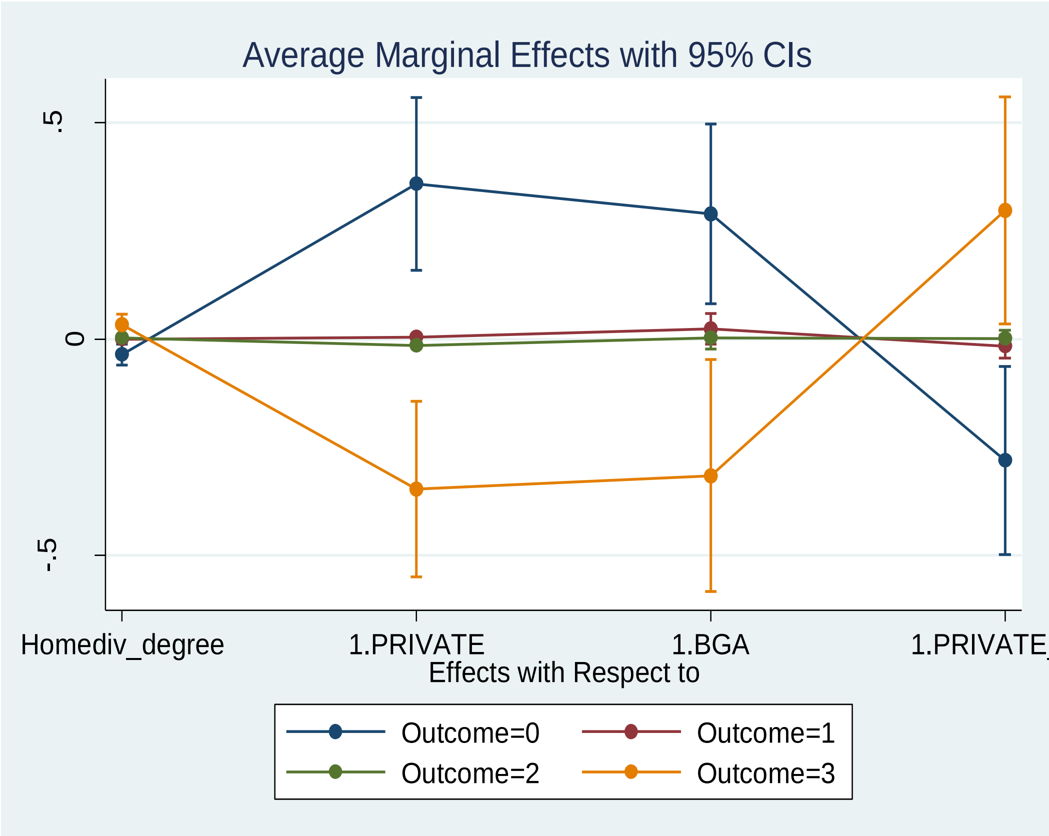


Figure 4.2.2.2 Average marginal effects-business group characteristics 6

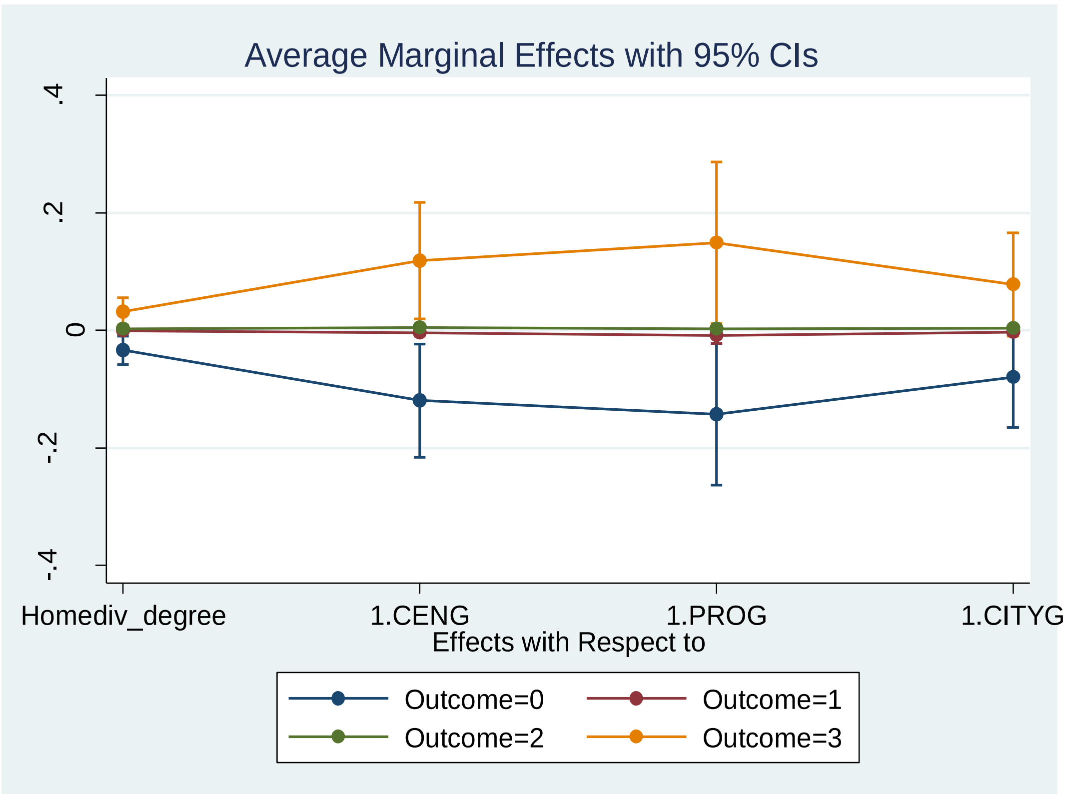


Figure 4.2.2.3 Average marginal effects-government affiliation level 7

4.4.3 Antecedents of International diversification

The above findings reveal that CMNEs tend to pursue different international diversification strategies by their domestic diversification activities, differing industrial sectors, business group affiliation, and state ownership types (i.e. POEs and SOEs with three different government affiliation levels). To some extent, these factors are 'push' factors that facilitate CMNEs' international diversification. How about 'pull' factors from the lens of target firms or even target markets?

Following from the previous chapters, I selected three firm-level motivations (technology, brand, and natural resources) that may attract Chinese firms' rapid foreign acquisitions. Herein, I mainly attempted to identify what real antecedents drive CMNEs to undertake more unrelated acquisitions or related acquisitions.

Models 11-16 were designed to identify the antecedents of Chinese firms' unrelated acquisitions, while models 17-22 were to test the antecedents of their related acquisitions. First of all, the Wald chi square test reveals that findings from models 11-12 and model 20 are not observable. Models 11-12 were designed to test the probability of Chinese firms' seeking technology via unrelated acquisitions and model 12 (particularly government affiliation level variables selected) was designed to test the probability of Chinese firms' seeking brands via related acquisitions. Results from models 11-12 and model 20 suggest that CMNEs' international unrelated acquisitions are not related to seeking technology, but to seeking brands and natural resources.

Table 4.4.3.1 Antecedents of Chinese firms' international diversification 1

	Unrelated International diversification						Related International diversification					
Antecedents	Technology seeking		Brand seeking		Natural resources seeking		Technology seeking		Brand seeking		Natural resources seeking	
Models	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18	Model 19	Model 20	Model 21	Model 22
Observable	**NO**	**NO**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**
Observations	253	253	232	219	265	265	301	280	301	280	301	301
Wald chi2 test result	20.94	23.37	28.85*	28.03+	66.89***	88.49***	40.70**	43.62**	30.38*	27.71	71.33***	94.03***
Prob>chi2	0.2834	0.2711	0.0359	0.0615	0.0000	0.0000	0.0026	0.0017	0.0472	0.1163	0.0000	0.0000
Null hypothesis (H0)	Accepted	Accepted	Rejected	^Rejected	Rejected	Rejected	Rejected	Rejected	Rejected	Accepted	Rejected	Rejected
Pseudo R2	0.0935	0.0999	0.1107	0.1093	0.3377	0.3931	0.1284	0.1412	0.0939	0.0933	0.2951	0.3462
Log pseudolikelihood	-111.4158	-110.6327	-114.0195	-110.9018	-89.6349	-82.1328	-145.336	-137.9799	-154.1183	-148.4316	-112.4868	-104.3406
Mean VIF	2.39	2.34	2.39	2.34	2.39	2.34	2.39	2.34	2.39	2.34	2.39	2.34
Regression results - variables												
PRIVATE	0.2194		0.3723		-0.9148**		0.6374**		0.6415**		-1.3075***	
	0.2406		*0.2478*		*0.2843*		*0.2150*		*0.2066*		*0.2395*	
CENG		-0.2168		-0.4047		0.6963*		-0.7952**		-0.6597**		0.9997***
		0.2622		*0.2688*		*0.3317*		*0.2792*		*0.2457*		*0.2767*

PROG		-0.8233		-		2.5205***		-		-		2.5765***
		0.5611		-		*0.5120*		-		-		*0.3956*
CITYG		-0.1071		-0.1415		0.9503**		-0.1870		-0.3134		1.0941***
		0.3330		*0.3527*		*0.3652*		*0.2698*		*0.2680*		*0.2926*
BGA	0.8291**	0.8510**	0.3353	0.3841	-0.7683*	-0.8570*	0.2124	0.2058	0.0160	0.0056	0.0051	-0.0335
	0.3083	*0.3060*	*0.2691*	*0.2672*	*0.3412*	*0.3536*	*0.2299*	*0.2329*	*0.2248*	*0.2260*	*0.3802*	*0.3855*
LAGE	0.1449	0.1547	-0.0659	-0.0294	0.0589	-0.0343	0.0802	-0.0173	-0.1268	-0.2234	-0.3617	-0.2230
	0.1892	*0.1861*	*0.1971*	*0.1907*	*0.2229*	*0.2325*	*0.2073*	*0.2199*	*0.1869*	*0.2020*	*0.2213*	*0.2285*
PROFIT	0.0039	0.0038	0.0035	0.0034	-0.0019	-0.0032	0.0119*	0.0122*	0.0084*	0.0078+	-0.0095*	-0.0082*
	0.0034	*0.0034*	*0.0029*	*0.0029*	*0.0032*	*0.0030*	*0.0046*	*0.0050*	*0.0039*	*0.0041*	*0.0041*	*0.0039*
LTASSET	-0.0235	-0.0216	0.0236	0.0314	0.0141	0.0146	-0.0569	-0.0362	0.0142	0.0256	0.1205+	0.1511*
	0.0548	*0.0554*	*0.0553*	*0.0567*	*0.0670*	*0.0666*	*0.0522*	*0.0544*	*0.0487*	*0.0483*	*0.0641*	*0.0719*
LANPAT	-0.0014	0.0074	-0.0056	0.0083	0.0120	-0.0439	0.1233**	0.1523***	0.0474	0.0649+	0.0267	-0.0008
	0.0390	*0.0399*	*0.0408*	*0.0421*	*0.0408*	*0.0414*	*0.0367*	*0.0391*	*0.0350*	*0.0363*	*0.0396*	*0.0397*
LANTRADM	0.1707	0.1494	0.2352*	0.1962+	-0.3715+	-0.1189	-0.1624	-0.2533*	-0.0107	-0.0515	-0.2710*	-0.2420+
	0.1064	*0.1102*	*0.1131*	*0.1174*	*0.1974*	*0.1702*	*0.1173*	*0.1217*	*0.1070*	*0.1054*	*0.1309*	*0.1314*
FEXPE	-0.1862	-0.1945	-0.1210	-0.1415	1.0362**	1.2094***	-0.0763	-0.0072	0.0341	0.0892	0.1458	0.0649
	0.2529	*0.2532*	*0.2546*	*0.2608*	*0.3144*	*0.3386*	*0.1994*	*0.2032*	*0.1895*	*0.1945*	*0.2180*	*0.2295*
PUBLIC	0.2578	0.2701	0.0133	0.0312	-0.9350***	-0.9871***	0.0478	-0.0202	-0.1175	-0.1891	-0.1612	-0.0640
	0.2009	*0.2071*	*0.2028*	*0.2159*	*0.2403*	*0.2390*	*0.1784*	*0.1892*	*0.1745*	*0.1833*	*0.2088*	*0.2286*

OWNTRANS	-0.0003	-0.0001	0.0007	0.0012	-0.0117***	-0.0118***	-0.0026	-0.0031	-0.0042	-0.0051+	0.0013	0.0026
	0.0029	*0.0030*	*0.0029*	*0.0031*	*0.0032*	*0.0032*	*0.0029*	*0.0030*	*0.0027*	*0.0028*	*0.0030*	*0.0031*
Constant	-1.4849	-1.3891	-2.1157	-2.1070+	0.3990	-0.1854	-0.5137	0.1430	-1.0616	-0.2608	-1.0588	-3.3719+
	1.3247	*1.2666*	*1.2981*	*1.2423*	*1.4985*	*1.4460*	*1.3326*	*1.2965*	*1.3203*	*1.2922*	*1.8495*	*1.9572*
Year control	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Correct predictions	81.42%	80.63%	77.16%	74.43%	85.28%	86.79%	79.40%	76.07%	77.41%	75.36%	85.38%	86.05%

Notes: H0: all of the regression coefficients are simultaneously equal to zero;
Robust standard error (italic); coefficient (underline);
*+ p<0.10, * p<0.05, ** 0<0.01, *** p<0.001*

4.5 Discussion

Consistent with the overarching theme, the findings above clearly showed a positive and significant relationship between state ownership types and CMNEs' international diversification strategies. This study contributes to the literature about the impact of business group affiliation and state ownership types on Chinese firms' strategies and, in particular, on international diversification via CBM&As. My findings have shown that CMNEs' international diversification via acquisitions would be determined not only its own firm-level attributes (i.e. firm age, total assets, and prior international experiences) but also by its government affiliation level and heterogeneity in industry sectors.

4.5.1 Home diversification and international diversification

Firms need to accumulate and learn different types of knowledge when expanding into foreign markets. Firms can achieve such knowledge through experiential learning in foreign markets (Johanson and Vahlne, 1977). Accordingly, firms' experiential knowledge of domestic diversification via M&As could increase related experiential knowledge of undertaking unrelated domestic acquisitions, which further facilitate their unrelated international diversification strategies. Lu, Liu, Filatotchev, and Wright (2014:457) suggest that "*when internationalizing operations, firms which have engaged in domestic diversification will likely have developed organizational knowledge about how to manage scope economies and achieve effective management and integration of business units located in different countries.*" In this study my findings have attested to the fact that acquirers' domestic diversification positively and significantly determines their international diversification via CBM&As. The findings contribute to existing IB research in a number of ways.

First of all, this finding revealed that Chinese firms had accumulated capacities or resources for acquiring unrelated businesses prior to international diversified acquisitions. Such skills and knowledge may decrease firms' negotiation costs and mitigate potential risks due to exposure to uncertain foreign environments. Thus firms' prior skills and knowledge may underpin firms' international diversification. In this regard, my finding is particularly consistent with the prior results of related research (e.g. Lu, Liu et al. 2014; Wu, Pangarkar and Wu, 2016), though I focused on firm's international diversification strategy via CBM&As.

Specifically, Lu, Liu et al. (2014) find that international diversification of Chinese firms' is positively and significantly influenced by their domestic regional diversification. Moreover, Wu, Pangarkar and Wu (2016) find that regional diversification of Chinese manufacturing MNEs can significantly predict global diversification. Therefore, this research may largely further contribute to existing literature on Chinese firms' diversification. I have found that Chinese firms' domestic product diversification activities significantly determine their international product diversification strategy via CBM&As. As such, firms' available resources or capabilities are critically important determinants to whether firms will undertake international product diversification strategies. Moreover, this view is also supported by my findings that Chinese firms' prior international experience is positively related to unrelated international diversification.

4.5.2 Business group affiliation and International diversification

Li and Wong (2003) suggest that Chinese firms may seek both unrelated diversification and related diversification to address market condition deficiency and institutional uncertainty. In this study I found that business group affiliation is not directly and significantly associated with Chinese firms' international diversification level. However, Chinese POEs affiliated to a business group are significantly related to firms' international diversification in developed countries. Business group affiliated firms have access to more resources than independent firms that facilitate Chinese firms' international diversification. Transaction cost theory suggests that a firm's sole motivation for diversification may be attributable to the exploitation of excess resources to improve efficiency (Teece, 1982). Earlier research suggests business group affiliation is more positively and significantly related to the diversification levels of firms in emerging economies than those in developed economies (Chang and Choi, 1988; Khanna and Palepu, 2000b). However, my findings support the argument that business group affiliation significantly facilitate Chinese POEs' international diversification activities only in developing countries.

Wan, Hoskisson, Short, and Yiu (2011) suggest that based on the assumption of an imperfect market, the resource-based view (RBV) could assist us in understanding the diversification, and especially related diversification, which may create significant value to the firm. My findings suggested that Chinese POEs are more likely to undertake related international diversification strategy. Namely, my findings partially support the argument by Wan et al. (2011) that the RBV could extend the understanding of firms' related diversification activities.

Furthermore, I identified that Chinese SOEs owned by high government affiliation levels are more likely to undertake unrelated international diversification via foreign

M&As. In comparison, findings from Chapter two suggest that neither foreign technologies nor brands attract Chinese SOEs' FDI via M&As. Therefore, previous mixed results on state ownership influence may be also attributed to CMNEs' differing specific FDI strategies (i.e. specific SAS strategies or international diversification strategy). This finding here, therefore, may firstly contribute to the past literature on the role of state ownership on Chinese firms' outward FDI. For example, prior studies found a significant and positive relationship between state ownership and Chinese firms' outward FDI (e.g. Hong, Wang, and Kafouros, 2015; Lu, Liu, Wright, and Filatotchev, 2014; Wang, Hong, Kafouros, and Wright, 2012). Other studies conversely found a significant but negative relationship between state ownership and Chinese firms' outward FDI (e.g. Huang, Xie, Li, and Reddy, 2017; Xia, Ma, Lu and Yiu, 2014). As a consequence, mixed results on state ownership influences may hinder the understanding EMNEs' real determinants of outward FDI. To an extent, my findings assist in addressing that issue.

In addition, a firm's diversification strategy could be explained as value-added purpose by drawing on the RBV (Andersen and Kheam, 1998). The nature of firms' available resources and host countries' market opportunities may direct a firm's diversification strategy (Peteraf, 1993). Firms may tend to pursue an international diversification strategy by developing new products and expanding new markets when their resource capabilities reach the target countries' resource requirements. My findings showed that business group affiliation significantly moderates the relationship between private ownership and unrelated international diversification. Compared to independent private firms, privately-owned Chinese group-affiliated firms possess more resources and are more likely to pursue an international product diversification strategy.

4.5.3 Government affiliation level and International product diversification

One significant contribution of this study is that my findings showed that Chinese SOEs owned by high government affiliation levels are more likely to undertake unrelated international diversification via CBM&As.

My findings support the IB literature founded on institutional theory by showing that government involvement significantly determines Chinese firms' international diversification in developed countries only. International diversification relatively leads to additional business risks due to exposure to uncertain environments (Majocchi and Strange, 2012). As such, governments may apply institutional pressure on Chinese SOEs requiring them to choose developed countries rather than developing countries for undertaking international diversification strategies. The the IBV should be added here to explain the role of state ownership type on CMNEs' international diversification strategy.

Xia, Ma, Lu, and Yiu (2013) suggest that resource dependence theory (RDT) contributes to a logic of diversification, as Pfeffer (1976:39) highlights, that a firm is likely '*to diversify operations and thereby lessen dependence on the present organizations with which it exchanges.*' Drawing on the RDT, my findings contribute to the understanding that Chinese SOEs were not significantly attracted to target firms' technology and brand-based assets, but to their natural resource endowments regardless of whether target firms were located in developed countries or developing countries.

4.5.4 Industrial transfer, location choices via international product diversification strategy

My findings presented above show that Chinese firms engaging in the sectors including

Agriculture, Construction, Public Administration, Retailer Trade and Wholesale Trade have a higher likelihood of pursuing unrelated acquisitions, thought there are underlying diversification risks and LOF costs (table 4.4.3.1). Drawing from the RDT, Chinese firms likely want to catch up with DMNEs in these sectors. Despite CMNEs lack of tradition ownership advantages (i.e. technologies, brands) that DMNEs possess and face the costs of LOF when operating abroad, they may still diversify businesses internationally in some sectors such as agriculture and wholesale trade to the world market as well as in construction, retailer and public administration to developing markets.

My findings showed that Chinese firms engaging in the sectors including agriculture, construction, public administration, retailer trade and Wholesale Trade have a higher likelihood of pursuing unrelated acquisitions in developing countries, thought there are underlying diversification risks and LOF costs. It may capture the market-seeking motives of these firms in developing countries. These findings suggested that a synthesis of international diversity strategies and the role of industry types based on the RBV offer new insights into the distinctive strategic behavior of EMNEs. These perspectives may assist to develop theories towards an integrated view of EMNEs' FDI strategies.

4.5.5 Other influential factors

In this research there are also some interesting findings regarding the control variables. First of all, I have found that younger Chinese firms are less likely to pursue international product diversification strategies in any other emerging countries via CBM&As. This could be due to younger Chinese firms lacking international experiences or capacities for managing unrelated foreign businesses. Notably, my findings have rightly attested that Chinese acquirers' prior international experience significantly and positively encouraged their international product diversification activities via CBM&As. Due to this, I recorded findings also consistent with extant studies (e.g. Jing, 2008) as regards to Chinese firms' foreign diversification activities. In detail, Jing (2008) empirically found that Chinese listed companies' international diversification activities are largely dependant on to what extent they need to address company risks.

Majocchi and Strange (2012) argued that firms' ownership structure determines their level of international diversification. In my research I have found that Chinese firms maintain a relatively smaller ownership percentage after acquiring unrelated foreign businesses, especially those located in developed countries. On balance, no empirical research has been developed to explore the relationship between the ownership advantage after the M&As and Chinese firms' strategic purpose of seeking international product diversification.

4.6 Conclusion

Firstly, my findings reveal that Chinese MNEs' domestic diversification activities significantly determine their international diversification in developed countries rather than developing countries. Second, Chinese privately-owned business groups are more likely to pursue international product diversification strategies in developing countries than in developed countries. Third, higher government affiliation level significantly influences Chinese MNEs' degree of international diversification in developed countries rather than in developing countries. Fourth, Chinese MNEs are more likely to choose other developing countries undertaking international diversification strategies in the industries of agriculture, construction, public administration, and retail trade.

Chapter 5: Conclusion

5.1 Discussion of main findings

EMNEs have been emerging as important competitors in the world (UNCTAD, 2017). The study of EMNEs has generated significant academic interest and generated the ‘Goldilocks debate’ regarding the need to analyze their distinctiveness in relation to theory (Cuervo-Cazurra, 2012). The debate has three perspectives: (i) EMNEs behave differently and there is a need to have new theories and models to analyse their behaviour; (ii) EMNEs are not a new species and existing theories can adequately explain their behavior; and (iii) the analysis of EMNEs does not require new theories but some modification or extension to existing theories and models (Cuervo-Cazurra, 2012). Research on EMNEs’ FDI strategies provides much research implication on existing theories and studies. Luo and Zhang (2016:333) contend that: “*The internationalization of EM MNEs [EMNEs] promises to change the landscape of world business, and provide a new laboratory for developing international business (IB) theories.*” This study is expected to make a significant contribution to extant theorizing and further understanding of EMNEs, with a particular reference to CMNEs.

Chapter five firstly discusses and summarises the key findings and contributions, highlighting the importance of understanding the business group affiliation and state ownership types that determine CMNEs’ specific outward FDI strategies. Identifying these unique home country effects in the world’s largest emerging economy may contribute to further evaluation research on EMNEs’ outward FDI performance.

As Meyer (2015:57) stresses, “*The identification and classification of investment motives is important for foreign direct investment (FDI) research because the objectives of an action determine how the performance should be assessed.*”

Secondly, chapter five focuses on the discussion about theoretical contributions of this research.

Thirdly, it discusses the shortcomings of this thesis and identifies some future research areas. Table 5.1 below summarises the key findings and contributions to past literature from Study 1 to Study 3.

Table 5.1 Research findings on Chinese MNEs' cross-border mergers and acquisitions between 2006 and 2015 1

Study	Purpose	Key findings	Contribution to the past literature
1	Influence of business group affiliation on CMNE SAS orientation	a) Chinese business group affiliated firms have a greater likelihood of seeking patents and also seeking greater volumes of patents which have NLB properties than non-affiliated firms b) Chinese business group affiliated firms with R&D center are more likely to seek NLB assets and also greater volumes of NLB assets than non-affiliated firms c) Internal capital markets within a business group has no significant influence on CMNEs' SAS FDI d) Business group affiliation significantly and positively facilitates Chinese POEs' NLB assets seeking FDI e) There are no significant relationship between business group affiliation and CMNEs' brand seeking FDI which have LB properties	Novelty-1: I identified a stronger evidence testifying that business group affiliation significantly facilitates CMNEs' patent-based asset seeking FDI, which contributes to the following past literature:
			● Chari's (2013) findings reveal that business group affiliation significantly facilitates Indian firms' outward FDI.
			● Both 'springboard perspective' (Luo and Tung, 2007) and 'strategic intent perspective' (Rui and Yip, 2008) suggest that EMNEs seek strategic assets via rapid cross-border CBM&As.
			● Sutherland's (2009) findings show that Chinese large business groups contribute to outward FDI, though there is no significant result of strategic asset seeking FDI.
			● Yiu (2011) argues that Chinese business groups facilitate Chinese firms' asset-seeking internationalization activities.
			Novelty-2: Compared with independent firms, I further found the evidence that business group affiliated firms have more access to technological resources (i.e. R&D centre) facilitating their foreign technology-related acquisitions, which may contributes to the past literature:
			● Gaur, Kumar, and Singh (2014) identify that Indian group affiliated firms can benefit more from technological capabilities than independent firms that positively affect firm decisions from export to FDI.
			Novelty-3: I found that Chinese POEs use 'business group affiliation' as a 'springboard' to seek foreign technologies via rapid foreign acquisitions (Luo and Tung, 2007; Rui and Yip, 2008), and also 'catch up' with DMNEs (Child and Rodrigues, 2005).

			Novelty-4: Notwithstanding, I also identified that business group affiliation does not significantly affect Chinese firms' trademark-based assets which have location-bounded properties. Such findings partially support the view that Rugman and Verbeke's (1992) 'New Internalization Theory' suggests.
2	Impact of State ownership type on technology and brand seeking FDI vis-a-vis natural resource seeking FDI	a) Chinese POEs are less likely to seek natural resource endowments via international acquisitions b) CMNEs owned by a higher government affiliation level are more likely to seek natural resource endowments held by foreign firms in both developed and developing countries c) Chinese POEs are more likely to seek foreign technologies in both developed countries and developing countries d) CMNEs owned by a higher government affiliation level are less likely to seek foreign technologies in developed countries and developing countries via CBM&As e) Chinese POEs are more likely to seek foreign brands in developed countries only f) Chinese MNEs with higher government affiliation level are less likely to seek foreign brands in developed countries and developing countries	Novelty-1: I firstly identified that Chinese POEs are more likely to seek both technologies and brands via rapid foreign acquisitions, which contribute to the past literature on EMNEs' SAS FDI (Child and Rodrigues, 2005; Luo and Tang, 2007; Rui and Yip, 2008). Such findings about Chinese POEs are also in accordance with previous studies (including Anderson and Sutherland, 2015; Cui, Meyer, and Hu, 2014; Huang and Chi, 2014; Zheng, Wei, Zhang, and Yang, 2016).
			Novelty-2: My findings showed that Chinese POEs tend to acquire technologies from both DMNEs and other EMNEs, however, they tend to acquire brands from DMNEs and not EMNEs. These firm-level evidences reveal that results on SAS FDI from previous location choice studies may be biased, which then contribute to the past literature (containing Deng and Yang, 2015; De Beule and Duanmu, 2012; Kang and Jiang, 2012; Ramasamy, Yeung, and Laforet, 2012; Yang and Deng, 2017)
			Novelty-3: my findings testified that the cross-border M&As by Chinese SOEs owned by higher government affiliation levels are not driven by the motivations of strategic asset seeking, but target firms' natural resource endowments. Anderson and Sutherland (2015) use three-way linear additive composite to measure strategic assets instead of using traditional number of patents registered and find that Chinese SOEs are less likely to seek strategic assets via M&As.

3	Influence of business group affiliation and state ownership types on International product diversification	a) CMNEs' level of domestic product diversification is positively and significantly related to their level of international product diversification via M&As b) Chinese POEs affiliated to a business group are more likely to seek unrelated international acquisitions in developing countries only c) CMNEs owned by a higher government affiliation level have more likelihood of seeking unrelated international diversification in developed countries only d) CMNEs tend to seek brand-assets and natural resource endowments via unrelated international acquisition, but not for technology-based assets e) CMNEs have more likelihoods of seeking technology-based assets, brand-based assets and natural resource endowments via related international acquisitions f) Chinese POEs tend to seek foreign technologies and brands via related international acquisitions rather than unrelated international acquisitions g) Prior international experiences significantly affect CMNEs' international product diversification activities in both developed and developing countries h) CMNEs in Agriculture and Wholesale Trade sector are more likely to seek unrelated international diversification in both developed and developing	Novelty-1: To the best of my knowledge, this is likely the first study to investigate the extent to which business group affiliation and state ownership types determine Chinese MNEs' international product diversification. Novelty-2: I identified that Chinese SOEs owned by high government affiliation levels are more likely to undertake international product diversification via foreign M&As. This finding may largely contributes to the past literature on the role of state ownership on Chinese firms' outward FDI: ● These studies found significant and positive relationship between state ownership and Chinese firms' outward FDI (e.g. Hong, Wang, and Kafouros, 2015; Lu, Liu, Wright, and Filatotchev, 2014; Wang, Hong, Kafouros, and Wright, 2012). ● These studies conversely found significant but negative relationship between state ownership and Chinese firms' outward FDI (e.g. Huang, Xie, Li, and Reddy, 2017; Xia, Ma, Lu and Yiu, 2014). Novelty-3: As for Chinese firms' unrelated international acquisitions, I still found that Chinese firms have more likelihood of seeking foreign brands and natural resource endowments. It may imply that Chinese firms acquiring foreign businesses are not only to maintain competitive advantages via acquiring related strategic assets, but also to build competitive advantages via acquired unrelated strategic assets. Novelty-4: To the best of my knowledge, this is likely the first study of identifying stronger evidences that Chinese firms engaged in different industry sectors tend to pursue differing international product diversification strategy.

		countries i) CMNEs in Construction and Public Administration sector are more likely to seek unrelated international diversification in developing countries only j) CMNEs in Manufacturing, Mining and Service sector significantly tend to seek related international acquisitions in developed countries only	

Notes: *SAS represents strategic asset seeking; NLB refers to non-location-bounded; LB means location-bounded; Industry classification is based on Standard Industrial Classification (SIC) Codes*

5.1.1 Chapter 2-Contributions to past literature: Business group affiliation and SAS orientation

Previous research uses mostly location choice modelling using country level proxies (i.e. number of patents granted *nationally*) (e.g. Buckley et al. 2007; Deng and Yang, 2015; Kang and Jiang, 2012; Ramasamy, Yeung, and Laforet, 2012; Yang and Deng, 2017), I used firm-level data instead (i.e. target firms' number of patents). Strategic assets by types were further disaggregated (i.e. patents and trademarks), which provides further insights into EMNE theory. I achieved five key findings regarding the relationship between business group affiliation and Chinese MNEs' SAS FDI by types in chapter two (Table 5.1).

Amsden and Hikino (1994) argue that business groups from late-industrializing countries possess 'project execution capability'. This argument implies that business groups in emerging markets become experts at internalising technology acquisitions and have strong motives to do so. Further, this argument that business group affiliation in emerging economies may facilitate SAS related FDI, a view generally in accord with the EMNE literature (*though not tested*) (Chari, 2013; Sutherland, 2009; Yiu, Bruton and Lu, 2007), can be supported by my findings.

The first key finding is that stronger evidence proving that business group affiliation significantly facilitates CMNEs' patent-based asset seeking FDI, contributes to past literature. Chari (2013) found a significant relationship between business group affiliation and Indian firms' outward FDI. Likewise, Sutherland (2009) testified that Chinese large business groups contribute to outward FDI, though there is no significant result of strategic asset seeking FDI. Thus, my findings further extend Chari's (2013) and Sutherland's (2009) empirical work. Moreover, Yiu (2011) argued that Chinese business groups facilitate asset-seeking internationalization activities. My findings support Yiu's (2011) proposition.

The second key finding is that I further found the evidence that business group affiliated firms possessing more technological resources (i.e. R&D center) facilitating their foreign technology-related acquisitions, when comparing with independent firms. Gaur, Kumar, and Singh (2014) identified that Indian group affiliated firms can benefit more from technological capabilities than independent firms that positively affect firm decisions from export to FDI.

The third novelty of my findings showed that business group affiliation significantly and positively facilitated Chinese POEs' patent-based asset seeking FDI. It may imply that Chinese POEs use 'business group affiliation' as a 'springboard' to seek foreign technologies via rapid foreign acquisitions (Luo and Tung, 2007; Rui and Yip, 2008), and also 'catch up' with DMNEs (Child and Rodrigues, 2005). As for Chinese SOEs, Huang and Chi (2014) have asserted that they have favorable institutional environment as opposed to POEs because Chinese governments consider SOEs as the pillars of the national economy. On that account, Chinese SOEs can enjoy privileged treatment from government owned banks and institutions, such as receiving larger financial support and R&D support or cooperation from Universities or Departments, developing their own indigenous technologies.

I also identified that business group affiliation does not significantly affect Chinese firms' trademark-based assets which have location-bounded properties. In contrast, Chinese business group affiliated firms have a greater likelihood of seeking patents, which have non-location-bounded (NLB) properties (i.e. can be exploited back in their *domestic* market, China), rather than trademarks, which have location bounded (LB) properties (and are therefore less easy to exploit domestically). My findings are partially supported by the rationality of 'New Internalization Theory' (developed by Rugman and Verbeke (1992)), which stresses the properties of location-boundedness in strategic assets. Drawing from Hennart's (2012) bundling model, EMNEs are likely to exploit assets acquired in the home market. Insignificant evidence of CMNEs' LB assets seeking FDI relatively supports Hennart's bundling model. As mentioned previously, China Bright Food Group acquired Weetabix, the world famous breakfast cereal brand especially in UK market, but failed to promote the brand in China's market in the end, and sold to US POST Holdings Company.

Since I found that business group affiliation in emerging economies is a facilitator for CMNEs' NLB assets seeking, it could be seen as one unique 'ownership' advantage. Ramamurti (2012) argued that EMNEs may have differing ownership advantages. There are FSAs and country-specific advantages (CSAs) that EMNEs can exploit when undertaking OFDI (Ramamurti, 2009; Rugman, 2009). Compared with independent firms, business groups' unique attributes, such as internal markets, inward linkages, and institutional support, as Yiu (2011) argues, potentially provide additional support to SAS FDI activities.

To argue Dunning's OLI model, Hennart (2012:168) highlighted that "*But some CSAs [country specific advantages] have owners, usually local firms, who can sometimes derive significant gains from the monopoly control of these resources. They can use this monopoly power to finance intangible-seeking investments in developed countries to obtain the firms specific advantages (FSAs) they lack and, hence compete with FSA-rich MNEs in their own market, and then internationally.*" As noted above, Chinese group affiliated firms control more complementary local resources (i.e. R&D centers) than independent firms. My findings have suggested that business group affiliated firms with R&D centers have a higher likelihood of seeking NLB assets via M&As. Therefore, these research findings are also partially supported by the rationality that Hennart's (2012) bundling model stresses.

This research concentrating on CMNEs' CBM&As in past ten years may also contribute to the understanding of the resource-dependence theory (RDT). Based on RDT, EMNEs' increasing CBM&As are thought to minimize environmental dependence on host countries via achieving strategic resources (Peng, 2012; Rabbiosi, Stefano, and Bertoni, 2012). In comparison, given market imperfections in emerging economies, Chinese POEs relatively speaking have a large dependence on advanced technologies and known brands. Drawing from the RDT, Deng and Yang (2015) suggested that host country-based factors are likely to have a ‘pull’ effect on M&As, whereas home country-based factors will have a ‘push’ effect. Put simply, target firms’ technologies and brands pull Chinese POEs to go abroad for acquisitions, while their business group affiliation pushes Chinese POEs to undertake foreign acquisitions. As such, my findings are also supported by the logic of the RDT (Pfeffer and Salncik, 1978, 2003).

5.1.2 Chapter 3-Contributions to past literature: Government affiliation level and specific FDI strategies

In Chapter 3 I discuss the role of state ownership types on Chinese firms’ specific FDI strategies. I firstly identified that Chinese POEs are more likely to seek both technologies and brands via rapid foreign acquisitions, which contribute to the past literature on EMNEs’ SAS FDI. Such findings about Chinese POEs are also in accordance with previous studies (including Anderson and Sutherland, 2015; Cui, Meyer, and Hu, 2014; Huang and Chi, 2014; Zheng, Wei, Zhang, and Yang, 2016). Notably, my findings also provided the significant evidence of seeking foreign brands by Chinese POEs. In comparison, my findings showed that the cross-border M&As by Chinese SOEs owned by higher government affiliation levels are not driven by the motivations of strategic asset seeking, but target firms’ natural resource endowments. Namely, the ‘springboard perspective’ and ‘strategic intent perspective’ failed to explain Chinese SOEs’ SAS FDI.

Secondly, my findings indicated that Chinese POEs tend to acquire both DMNEs and other EMNEs for seeking technologies, and prefer DMNEs only for seeking brands. This firm-level evidence implies that results on SAS FDI from previous location choice studies may be biased, which then contribute to the past literature (e.g. Deng and Yang, 2015; De Beule and Duanmu, 2012; Kang and Jiang, 2012; Ramasamy, Yeung, and Laforet, 2012; Yang and Deng, 2017).

In addition, Cuervo-Cazurra et al. (2014) argued that existing theory does not present a consistent prediction of the state ownership influence on MNEs' outward FDI. To illustrate, previous empirical studies provide the positive effect of state ownership on EMNEs' outward FDI (e.g. Hong, Wang, and Kafouros, 2015; Lu, Liu, Wright, and Filatotcheve, 2014), while other studies show the negative influence of state ownership on CMNEs' outward FDI (Huang, Xie, Li and Reddy, 2017; Xia, Ma, Lu and Yiu, 2014). These mixed findings reveal that the linkages between state ownership influence and CMNEs' outward FDI may be more complex than presumed.

Fourthly, my findings indicated that Chinese firms owned by higher government affiliation levels are more likely to seek natural resource endowments as opposed to both technologies and brands. This finding may contribute to previous related literature. Previous studies have suggested that another important antecedent of Chinese outward FDI is to achieve greater security of access to natural resources (e.g. Buckley et al. 2007; Deng, 2004, 2007; Hong and Sun, 2006; Kang and Jiang, 2012; Kolstad and Wiig, 2012; Li, Newenham-Kahindi, Shapiro, and Chen, 2013; Morck et al., 2008). For instance, Kolstad and Wiig (2012) argued that it likely reveals Chinese governments' political objectives if China's general FDI is directed to seek overseas natural resources. From the lens of micro level, my research findings rightly further revealed that Chinese SOEs may be under institutional pressure so that they have to seek and reserve natural resources reaching governments' strategic objectives.

Another explanation may be that Chinese SOEs acquiring foreign firms involved natural resource sectors are to mitigate own resource dependencies and build competitive advantages as opposed to counterparts. The core argument of RDT stresses that firms can implement various viable strategies to mitigate external constraints and achieve critical resources through depending on certain environment (Pfeffer and Salncik, 1978, 2003). The RDT has been seen as one of the mainstream theoretical logics for exploring the determinants of acquisitions (Hillman et al. 2009).

5.1.3 Chapter 4-Contributions to previous literature: Home country effects and international product diversification strategy

Firms' product diversification activities have been found to be pervasive in emerging economies including China, India, Mexico, and Russia (Du, Lu and Tao, 2015). Nonetheless, research on whether home country effects determine CMNEs' international product diversification via M&As is scant. To the best of my knowledge, this is likely the first study to investigate the extent to which business group affiliation and state ownership types determine CMNEs' international product diversification.

Specifically, I identified that Chinese SOEs owned by high government affiliation levels are more likely to undertake international product diversification via foreign M&As. For example, one provincial government-owned enterprise in our sample, China Guangdong Nuclear Power Corporation (CGN) (SIC code: 4911) acquired Kalahari Minerals PLC (SIC code: 1094) in year of 2009, 2010, 2012, 2014. Kalahari Minerals PLC is based in London, which mainly engages in exploring minerals in Namibia. Thus, CGN can achieve minerals for future strategic reserve of natural resource endowments by pursuing an international product diversification strategy. Such a finding, therefore, primarily contributes to existing IB literature on the role of government involvement on Chinese firms' outward FDI strategy.

In addition, prior findings from Chapter two suggest that neither foreign technologies nor brands attract Chinese SOEs' FDI via M&As. Herein, previous inconsistent results on state ownership influence may be also attributed to CMNEs' differing specific FDI strategies (i.e. SAS strategies or international product diversification strategy). This finding, therefore, further reveals the importance of identifying specific FDI strategies by using firm-level data.

Furthermore, my findings have also shown that Chinese POEs are less likely to undertake unrelated international acquisitions in both developed and developing countries. Those affiliated to a business group, however, have a greater probability of pursuing unrelated international acquisitions in developing countries. Moreover, as for Chinese firms' unrelated international acquisitions, I found that Chinese firms have a higher likelihood of seeking foreign brands and natural resource endowments. In other words, Chinese privately-owned business groups are less likely to exploit their economies of scale in developing countries, but are attracted by other purposes. Further, it may imply that Chinese firms acquiring foreign businesses are not only to maintain competitive advantages via acquiring related strategic assets, but also to build competitive advantages via acquired unrelated strategic assets and expand in other developing countries.

Ramaswamy et al. (2017) argue that if business groups were very involved with unrelated diversification, their benefits such as economies of scale would be weakened. Therefore, industry types may be another influential factor determining CMNEs' international product diversification strategy. For instance, I found that CMNEs in construction and public administration sectors are more likely to seek unrelated international diversification in developing countries only. Also, CMNEs in agriculture and wholesale trade sectors are more likely to seek unrelated international diversification in both developed and developing countries. Therefore, Chinese privately-owned business groups that undertook unrelated international product diversification strategies in developing countries are probably engaged in the construction, public administration, agriculture, or wholesale trade sector. To the best of my knowledge, this is likely the first study identifying stronger evidence that Chinese firms engaged in different industry sectors tend to pursue differing international product diversification strategy.

In light of the home market, I also found that CMNEs' degree of domestic diversification activities also positively and significantly determine their degree of international diversification. If firms had completed several deals of acquiring unrelated businesses in the domestic market, this domestic diversification would allow them to accumulate certain coordination skills and knowledge in managing increased diversity of domestic activities. Such skills and knowledge may underpin firms' international diversification. To illustrate, *Alibaba Group* (SIC code: 5961), one of my research samples, acquired Mainland China based *China Civilin*k (SIC code: 7375) in 2009 and then acquired *Auctiva Corporation* affiliates (SIC code: 7372) located in Singapore with 10.193 percentage of ownership (i.e. in year 2014), and in America with 100 percent ownership (i.e. in 2010, 2011, and 2013). In 2005, *Alibaba Group* acquired the package assets of *Yahoo China* including search technology, the website, communication and advertising business (Xinhua, 2005), diversifying and enhancing its online searching service and business activities.

In this research I have found that Chinese firms' age is significantly but negatively related to their international product diversification activities in any other emerging countries via CBM&As. It is possible that the reason is that younger Chinese firms lack international knowledge or experience of managing more diversified foreign businesses. More importantly, I found that Chinese firms' prior international experience (e.g. greenfield subsidiaries) significantly and positively affect their international product diversification activities. To a large extent, this research finding contributes to the Uppsala model (Johanson and Vahlne, 1977, 2009), revealing that EMNEs also need to accumulate some amount of knowledge or experiences before they engage in international markets.

5.2 Conceptual contributions

To identify specific home country effects that facilitate CMNEs' FDI strategies, I integrate two traditional firm theories including resource-based view (RBV) and institution-based view (IBV). Based on a specific literature view on CMNEs' outward FDI strategies, there are big gaps. These gaps mainly refer to the lack of studies on the role of business group affiliation and state ownership types on CMNEs seeking strategic assets in what types and properties and undertaking international product diversification via rapid overseas M&As. To this end, my findings may further extend the logic of the RBV and the IBV in understanding CMNEs' FDI strategies.

5.2.1 Resource-based view

The resource-based view (RBV) suggests "*what a firm wants is to create a situation where its own resource position directly or indirectly makes it more difficult for others to catch up*" (Wernerfelt, 1984:173). Barney (1991) further argues that resource heterogeneity and immobility are critical assumption that enable us to understand sources of sustained competitive advantage.

Business groups are seen as a pool of resources that can facilitate member firms' internationalization (Carney, 2008; Yiu, Bruton and Lu, 2005). Du and Boateng (2015:431) state that "*the resource-based view literature suggests that one important reason for CBM&A [cross-border mergers and acquisitions] is to gain access to strategic assets, such as natural resources, product differentiation, patent-protected technologies, and superior managerial and marketing skills.*" In chapter two, I found that Chinese business group affiliated firms with R&D center have a higher likelihood of seeking patent-based assets and a greater amount of patent-based assets. Drawing from the RBV, it may extend the view that business group affiliation can be seen as a unique 'ownership' advantage.

Moreover, business groups, as an organizational form, have been widely prevalent in emerging economies as an alternative to address institutional voids (Carney et al. 2011; Chang and Hong, 2000; Khanna and Palepu, 1997; Leff, 1978). This question of 'how do business groups add value?' has been central to research on business groups. A firm's diversification strategy could be explained as value-added purpose by drawing on the RBV (Andersen and Kheam, 1998). The nature of firms' available resources and host countries' market opportunities may direct a firm's diversification strategy (Peteraf, 1993). In short, firms tend to pursue an international product diversification strategy by developing new products and expanding new markets when their resource capabilities reach the target countries' resource requirements. In Chapter four, my findings showed that business group affiliation significantly moderates the relationship between private ownership and unrelated international product diversification.

The RBV suggests variations in assets or resources affect outward FDI. However, the government involvement interfering with firm resource utilization and then influencing firms outward FDI is neglected. My findings in chapter four showed that Chinese SOEs owned by higher government affiliation levels tend to target developed countries for unrelated international product diversification strategy other than developing countries. International diversification relatively leads to additional business risks due to exposure to uncertain environments (Majocchi and Strange, 2012). As such, governments may pose institutional pressure on Chinese SOEs in undertaking international product diversification strategies, except for some specific purposes such as strategic natural resource reservation. As such, use of IBV may further assist us in understanding and explaining the role of state ownership types on CMNEs' international product diversification strategies.

5.2.2 Institution-based view

The institution-based view (IBV) suggests that national institutions can be regarded as the rules of the game that influence firms' strategies (North, 1990). Moreover, North formally defines institutions as "*the humanly devised constraints that structure human interaction*" (1990:3), which contains formal institutions (i.e. laws, regulations) and informal institutions (i.e. social customs, norms, cultures). The organizational form of business groups is to address the voids that emerging economies lack the effective formal and informal institutions (Khanna and Palepu, 1997, 2000). In comparison, SOEs' behaviors or strategies may be more influenced by formal institutions, while POEs' may have to address both formal and informal institutions.

Peng, Wang, and Jiang (2008:923) argued that "*it is research on emerging economies that has pushed the institution-based view to the cutting edge of strategy research, which is becoming the third leg in the strategy 'tripod' (the other two legs being industry- and resource-based views)*". My findings in chapter three suggested that Chinese SOEs owned by a higher government affiliation level were neither attracted by target firms' technology- nor brand-based assets, but by natural resource endowments. In contrast, my findings revealed Chinese POEs have a higher likelihood of seeking both technology-based and brand-based assets. Related research suggests that Chinese SOEs have to follow home country governments' strategic needs and invest more in natural resource sectors, while POEs have more interests on the target market size and strategic assets of host countries (Amighini, Rabellotti, and Sanfilippo, 2013; Huang and Chi, 2014). As they are '*a part of the home-country institutions, SOEs may carry non-commercial objectives driven by the political interests of the state*' (Cui and Jiang, 2012:268). The IBV suggests that national institutions can be regarded as the rules of the game that influence firms' strategies (North, 1990). Therefore, my findings contribute to extending the IBV by investigating the role of state ownership types on CMNEs' FDI strategies.

Furthermore, my findings may enable to extend the IBV by examining the role of business group affiliation on CMNEs' specific SAS FDI strategies. My findings in chapter two have shown that business group affiliation significantly facilitates Chinese

POEs’ patent-based asset seeking FDI. Group affiliated firms with an R&D centre have a higher likelihood of seeking patent-based assets, especially when comparing with independent firms. As discussed above, the RBV may better explain the significant role played by the business group affiliation on CMNEs’ SAS FDI. A substantial literature suggests that business group’s ability lies in addressing institutional voids via internal capital, labour and product markets is often remarked upon (Carney, Essen, Estrin, and Shapiro, 2017; Granovetter, 1995; Kedia, Mukherjee, and Lahiri, 2006; Khanna and Palepu, 1997; Lee, Peng, and Lee, 2008).

Above all, both the RBV and the IBV should be combined to explain the role of business group affiliation and state ownership types on CMNEs’ specific FDI strategies. This also suggests that successful EMNEs (including CMNEs) are mostly ambidextrous, and exploit institutional complementarities.

5.3 Managerial implications

The findings provide some important managerial implications for both managers and policymakers.

In Study 1, I found that Chinese business group affiliates are positively and significantly associated with patent seeking FDI strategies. Many large firms in China are business group affiliated. Therefore, this study has important implications for EMNEs’ managers. Managers should take full advantage of domestic rapid growth before venturing abroad. This research may help managers of DMNEs understand the true antecedents of EMNEs’ FDI strategies.

Secondly, study 2 may assist in reminding the government or any other relevant institutions to offer Chinese independent firms or POEs more supportive policies if they are going to expand into foreign markets and more entrepreneurial guidance if they only want to maintain positions in the domestic markets. This research also has implications on further understanding the role of government in emerging economies. Luo (2007) stresses that China follows a dual-track approach to operating Chinese market economy that keeps certain government controls while liberalizes the former central planning mechanism.

In study 3, I found that CMNEs in the construction and public administration sectors are more likely to seek unrelated international diversification in developing countries only. Also, CMNEs in agriculture and wholesale trade sectors are more likely to seek unrelated international diversification in both developed and developing countries. These findings may provide CMNEs' managers more guidance on undertaking foreign product diversification strategies in terms of industry factors.

5.4 Limitations and future research

This research has several limitations that may suggest avenues for future research.

First of all, although business groups are particularly prevalent in emerging economies, there are significant differences between them and they are also known by various kinds of designations (e.g. *ethnic Chinese business groups* in Indonesia, Malaysia, Philippines, Thailand, the Chaebol in Korea, *Business houses* in India, the *Hongs* in Hong Kong, China) (Carney, 2008). In China, the central government initially started to form large business groups known as *qiye jituan* or *national team* (Nolan, 2001; Sutherland, 2009). Afterwards, Chinese business groups have experienced a series of reforms including ownership structures and organizational strategies. Thus, this study's findings may be subject to the research generalizations of other emerging economies due to differing characteristics of business groups.

Secondly, I focused on all Chinese CBM&As completed between 2006 and 2015. One negative factor regarding our methodology is that I used a pooled data set. Since I selected a time period between 2006 and 2015, the impact of the Global Financial Crisis in 2008 on CMNEs' SAS FDI via CBM&As may need for further consideration. As such, this might be one research limitation. Moreover, neglecting greenfield FDI might lead to a biased finding regarding CMNEs' SAS FDI by business groups.

Thirdly, scholars suggest that two different dimensions should be considered for explaining EMNEs' state ownership influence, including the percentage of state-owned shares and the type of government affiliation (e.g. Li, Cui, and Lu, 2014; Wang et al. 2012). However, it was difficult to achieve sufficient data about the percentage of state ownership, especially for those unlisted POEs.

Fourthly, I have to admit that any cross-level study of firm-level factors which collectively determine firms' international diversification is by no means exhaustive. As for the home country effects on international diversification strategy, existing studies have also found other factors may determine firms' diversification strategy, such as the CEOs, board composition, and the top management team (Hitt, Tihanyi, Miller and Connelly, 2006; Majocchi and Strange, 2012; Ramaswamy, Li, and Petitt, 2004; Wan, Hoskisson, Short, and Yiu, 2011), top managers' prior experiences (Sahaym and Nam, 2013), entrepreneurs' personal characteristics including age, education, and managerial experiences (Du, Lu, and Tao, 2015). In future, some more country-level variables that may affect firms' international diversification can be added, including cultural distance or country-level distances to serve as proxies of the costs of integrating foreign firms, like Hisey and Caves (1985) did. They employed the U.S.'s FDI stock in the target country by its GDP to represent the density of FDI in the host economy.

Fifthly, this study simply selected a single country, China, as research sample. Therefore, findings from CMNEs' FDI strategies via CBM&As may be limited to research generalization on other EMNEs. In the future, I would attempt to build a comparative study between CMNEs and another EMNEs in exploring their distinct OFDI SAS strategies via CBM&As.

Appendix

Chapter 1-Tables and figures

Figure A1.2.2 FDI stocks (millions of dollars) 1

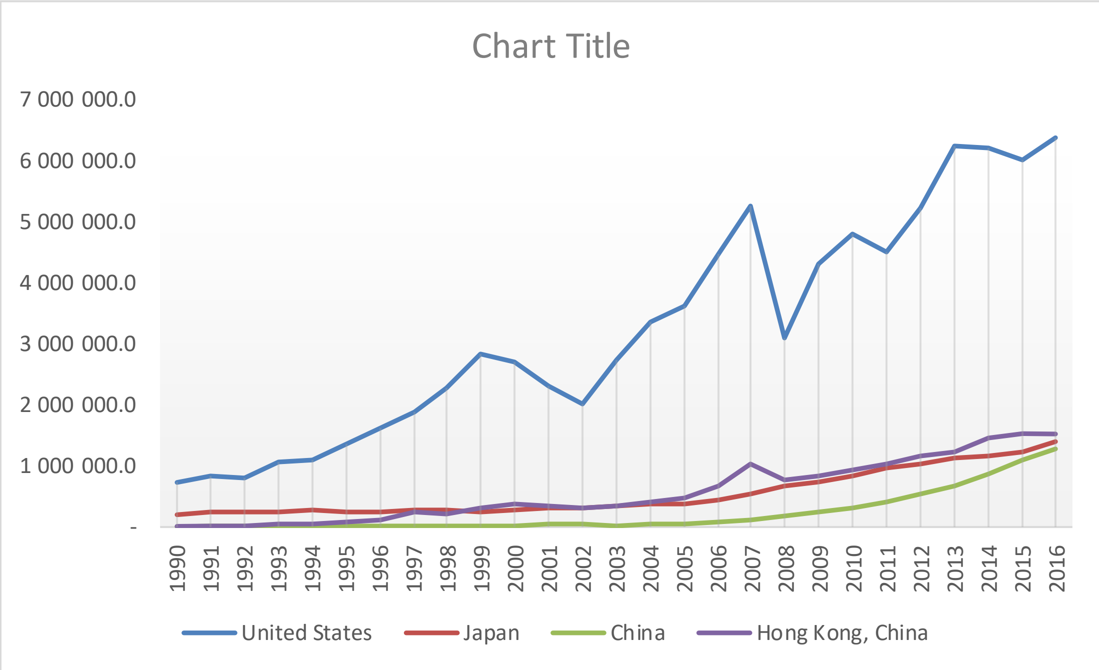
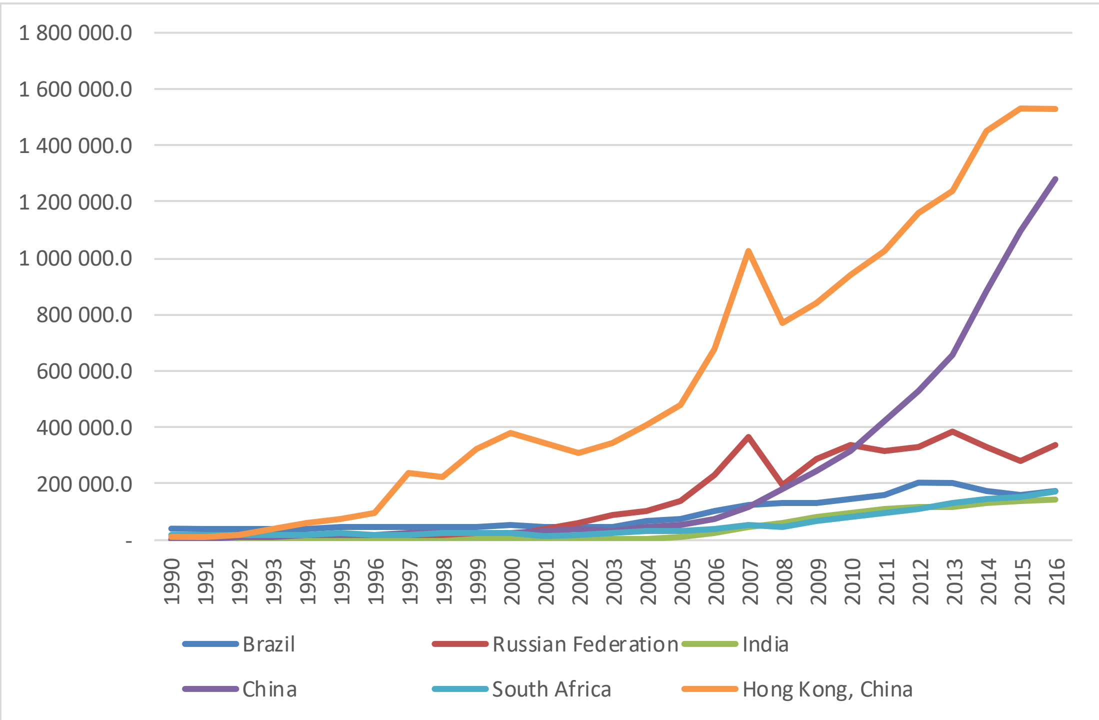


Figure A1.2.3: FDI stocks-BRICS (millions of dollars) 2



Chapter 2-Tables and figures

Table A2.4.2.1: Probit model-NLB assets seeking FDI 1

Variable	Model 1-c	Model 2-c	Model 3-c	Model 4-c	Model 5-c
	Full sample	Full sample	Full sample	SOE sample	POE sample
DEVOPED	1.0323***	1.1053***	1.1224***	1.2096***	1.1653***
	0.1550	*0.1618*	*0.1624*	*0.2582*	*0.2450*
BGA	0.4653**	0.6050**	0.1194	0.7652	0.6086**
	0.1728	*0.1771*	*0.2343*	*0.5384*	*0.2048*
BG_FIN			-0.0131		
			0.1564		
BG_RD			0.6541***		
			0.1830		
STATE	-0.3851**	-0.3279*	-0.4029**		
	0.1333	*0.1356*	*0.1438*		
LAGE	-0.0658	-0.1174	-0.1630	-0.1218	-0.1413
	0.1140	*0.1187*	*0.1235*	*0.1699*	*0.1951*
PROFIT	0.0033	0.0037	0.0028	-0.0043	0.0090**
	0.0024	*0.0025*	*0.0026*	*0.0039*	*0.0034*
LTASSET	-0.0467	-0.0066	0.0055	0.0092	0.0289
	0.0390	*0.0430*	*0.0458*	*0.0568*	*0.0957*
LANPAT	0.0655**	0.0576*	0.0554*	0.0091	0.1430**
	0.0220	*0.0259*	*0.0260*	*0.0350*	*0.0434*
LANTRADM	0.0617	0.0658	0.0430	0.1221	-0.0216
	0.0631	*0.0716*	*0.0737*	*0.1156*	*0.0969*
FEXPE	-0.1830	-0.2429+	-0.2417+	-0.4101*	-0.0811
	0.1402	*0.1410*	*0.1430*	*0.2055*	*0.1980*
PUBLIC	0.0327	-0.0027	0.0312	0.0644	0.0293
	0.1249	*0.1295*	*0.1333*	*0.1740*	*0.2330*
OWNTRANS	-0.0013	-0.0015	-0.0019	0.0008	-0.0061*
	0.0017	*0.0018*	*0.0018*	*0.0025*	*0.0027*
lambda_bga	-0.0379	-0.1525	-0.1935	-0.0628	-0.9056
	0.4617	*0.4825*	*0.5029*	*0.7103*	*0.9593*
HITECH		1.0896***	1.1214***	0.9548*	1.0870*
		0.2459	*0.2521*	*0.4124*	*0.4779*
MEDTEC		0.6574**	0.7386***	0.5469*	0.6938
		0.1928	*0.1997*	*0.2337*	*0.4556*
LOWTEC		0.7997**	0.9346**	0.2481	1.0851*
		0.2868	*0.2949*	*0.4761*	*0.5055*
KNINTEN		0.2626	0.3824	0.2776	0.3514
		0.2330	*0.2372*	*0.2983*	*0.4812*
LEKNIN		0.2439	0.3572	0.1605	0.2003

		0.2617	*0.2709*	*0.3385*	*0.5129*
Constant	-0.2629	-1.4581+	-1.6513+	-2.3061	-1.7007
	0.7415	*0.8695*	*0.9096*	*1.4768*	*1.5310*
Year control	Included	Included	Included	Included	Included
Observations	780	780	780	417	363
Wald chi2	103.17	139.87	154.86	70.15	87.3
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.1382	0.1764	0.193	0.179	0.2326
Log pseudolikelihood	-351.3398	-335.77	-328.973	-158.7887	-160.9198
Mean vif	2.53	2.54	2.57	2.55	2.55

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

Table A2.4.2.2: Negative binomial regression-NLB assets seeking FDI 2

Variable	Model-6c	Model-7c	Model-8c	Model-9c	Model-10c
	Full sample	Full sample	Full sample	SOE sample	POE sample
DEVOPED	2.4407***	2.6090***	2.7177***	4.5216***	3.6547***
	0.6377	*0.6111*	*0.6351*	*0.8986*	*0.5399*
BGA	0.9844	1.9111**	-0.0981	7.3402***	1.8174**
	0.6475	*0.6886*	*0.8698*	*1.7778*	*0.5656*
BG_FIN			-1.5591*		
			0.6368		
BG_RD			4.3855***		
			0.7090		
STATE	-0.3338	-0.6289	-1.2728*		
	0.5982	*0.5463*	*0.5401*		
LAGE	-0.1659	-0.3458	-0.9257+	-2.3749*	0.4032
	0.5434	*0.4172*	*0.5248*	*0.9714*	*0.4665*
PROFIT	-0.0071	-0.0055	-0.0077	-0.0768**	0.0203*
	0.0103	*0.0074*	*0.0075*	*0.0230*	*0.0080*
LTASSET	-0.0838	0.0198	0.0350	0.3719*	0.4940*
	0.1422	*0.1090*	*0.1176*	*0.1704*	*0.2396*
LANPAT	0.5081***	0.4034***	0.4132***	0.0706	0.6128***
	0.0809	*0.0845*	*0.0845*	*0.1277*	*0.0905*
LANTRADM	0.3161	0.5275*	0.2874	0.4712	-0.4584*
	0.2653	*0.2355*	*0.2633*	*0.5232*	*0.2337*
FEXPE	-0.7657+	-0.7767+	-0.8701+	-4.2918***	0.1076
	0.4318	*0.4132*	*0.4745*	*0.8823*	*0.5501*
PUBLIC	-0.4326	-0.4415	-0.3403	-2.6775***	-0.1587
	0.5190	*0.4460*	*0.4906*	*0.6444*	*0.5460*
OWNTRANS	0.0047	0.0012	0.0032	-0.0142	-0.0194**
	0.0060	*0.0057*	*0.0060*	*0.0096*	*0.0071*
lambda_bga	0.8856	-0.4333	-0.2789	-3.8264	-5.0967*
	2.0320	*1.7251*	*1.8418*	*2.3720*	*2.2036*
HITECH		1.5605+	1.8534*	1.6571	3.4282**
		0.8363	*0.8972*	*1.5200*	*1.2577*
MEDTEC		1.8130**	1.8221**	2.5230*	3.3148**
		0.6861	*0.6971*	*1.2438*	*1.1017*
LOWTEC		0.0570	1.5379	1.2552	3.4183*
		0.9684	*1.2228*	*1.6912*	*1.5344*
KNINTEN		-1.4464*	-0.7981	1.5694	0.8000
		0.7351	*0.7966*	*1.5017*	*1.2213*
LEKNIN		-0.7052	0.2558	-3.4549*	2.8247*
		0.8211	*0.9525*	*1.3604*	*1.2368*
Constant	0.9072	-1.6003	-0.4362	-3.1552	-10.8350***
	2.5446	*2.0642*	*2.1556*	*3.6289*	*3.0387*
Year control	Included	Included	Included	Included	Included

Observations	780	780	780	417	363
Wald chi2	287.48	459.59	480.53	351.63	516.82
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.0499	0.057	0.0626	0.0706	0.1152
Log pseudolikelihood	-1251.4955	-1242.1969	-1234.8320	-564.3170	-624.6368
LR test of alpha=0					
Prob>=chibar2	0.0000	0.0000	0.0000	0.0000	0.0000
Mean vif	2.53	2.54	2.57	2.11	3.98
Voung test of zinb vs standard negative binomial (inflate _cons)					
z	2.21	0.7	-0.01	1.14	0.29
Pr>z	0.0136	0.2423	0.5054	0.1266	0.3863

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

Table A2.4.2.3: Ivprobit regression model -NLB asset seeking FDI 3

Models	Model 11-co	Model 12-co	Model 13-co	Model 14-co	Model 15-co
Variables	Full sample	Full sample	Full sample	SOE	POE
DEVOPED	1.6808***	1.8339***	1.8405***	1.9831***	1.9060***
	0.2231	*0.2279*	*0.2312*	*0.3512*	*0.3193*
BGA	0.4203*	0.5450**	0.1110	0.7916	0.5155**
	0.1678	*0.1722*	*0.2225*	*0.4877*	*0.1977*
BG_FIN			0.0793		
			0.1516		
BG_RD			0.5444**		
			0.1785		
STATE	-0.3612**	-0.2917*	-0.3680**		
	0.1292	*0.1318*	*0.1407*		
LAGE	0.0088	-0.0345	-0.0756	-0.0345	-0.0989
	0.1068	*0.1115*	*0.1149*	*0.1615*	*0.1781*
PROFIT	0.0043+	0.0047*	0.0039	-0.0001	0.0082*
	0.0023	*0.0024*	*0.0025*	*0.0043*	*0.0033*
LTASSET	-0.0433	0.0033	0.0105	0.0237	0.0567
	0.0383	*0.0422*	*0.0445*	*0.0543*	*0.0963*
LANPAT	0.0471*	0.0407	0.0419+	-0.0023	0.1250**
	0.0218	*0.0249*	*0.0250*	*0.0336*	*0.0409*
LANTRADM	0.0500	0.0453	0.0234	0.0590	-0.0381
	0.0609	*0.0678*	*0.0696*	*0.1113*	*0.0929*
FEXPE	-0.2606+	-0.3153*	-0.3158*	-0.4866*	-0.1037
	0.1366	*0.1373*	*0.1394*	*0.1973*	*0.1922*
PUBLIC	0.1234	0.0951	0.1166	0.1816	0.0703
	0.1212	*0.1257*	*0.1291*	*0.1714*	*0.2223*
OWNTRANS	-0.0020	-0.0023	-0.0025	0.0005	-0.0072**
	0.0017	*0.0017*	*0.0017*	*0.0024*	*0.0026*
lambda_bga	-0.0604	-0.2215	-0.3079	-0.0190	-1.1011
	0.4454	*0.4655*	*0.4835*	*0.6773*	*0.9359*
HITECH		1.1141***	1.1558***	1.2379**	1.0115*
		0.2404	*0.2464*	*0.3832*	*0.4600*
MEDTEC		0.6406**	0.7236***	0.5828*	0.6940
		0.1872	*0.1935*	*0.2279*	*0.4372*
LOWTEC		0.8012**	0.9260**	0.3264	1.0688*
		0.2784	*0.2854*	*0.4573*	*0.4906*
KNINTEN		0.2714	0.3765+	0.2949	0.3469
		0.2228	*0.2281*	*0.2851*	*0.4628*
LEKNIN		0.4034	0.4964+	0.3273	0.3882
		0.2518	*0.2596*	*0.3177*	*0.4978*
Year control	Included	Included	Included	Included	Included

Constant	<u>-0.7939</u>	<u>-2.1599</u>	<u>-2.2505*</u>	<u>-3.3355*</u>	<u>-2.4977</u>
	0.7357	*0.8518*	*0.8833*	*1.3666*	*1.5455*
Observations	776	776	776	413	363
Wald chi2	135.11	192.34	206.63	97.88	123.99
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000
Log pseudolikelihood	-602.3468	-575.0917	-567.3948	-293.5716	-247.8606
Wald test of exogeneity					
chi2	13.41	15.52	14.78	6.95	9.52
Prob>chi2	0.0003	0.0001	0.0001	0.0084	0.002
Mean vif	2.59	2.59	2.61	2.6	2.6

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

Table A2.4.2.4: Instrumental variables (GMM) regression-NLB asset seeking FDI 4

Models	Model 16-co	Model 17-co	Model 18-co	Model 19-co	Model 20-co
Variables	Full sample	Full sample	Full sample	SOE	POE
DEVOPED	1.3375***	1.3255***	1.2746***	1.5323***	1.3108***
	0.1954	*0.2031*	*0.2054*	*0.3886*	*0.2454*
BGA	0.2937+	0.3396*	0.0142	0.4442	0.2501
	0.1587	*0.1624*	*0.1863*	*0.4451*	*0.1994*
BG_FIN			0.1743		
			0.1889		
BG_RD			0.3895**		
			0.1187		
STATE	-0.3831*	-0.3374*	-0.4115*		
	0.1779	*0.1791*	*0.1905*		
LAGE	0.1574	0.1036	0.0628	-0.0498	0.0915
	0.1155	*0.1150*	*0.1144*	*0.1637*	*0.1672*
PROFIT	0.0022	0.0023	0.0017	-0.0008	0.0027
	0.0017	*0.0018*	*0.0017*	*0.0032*	*0.0024*
LTASSET	-0.0420	0.0000	0.0066	0.0134	0.0618
	0.0366	*0.0396*	*0.0396*	*0.0570*	*0.0769*
LANPAT	0.0958**	0.0812**	0.0825**	-0.0278	0.2330***
	0.0278	*0.0311*	*0.0317*	*0.0320*	*0.0627*
LANTRADM	0.0566	0.0648	0.0354	0.2159+	-0.1555
	0.0781	*0.0817*	*0.0822*	*0.1310*	*0.1099*
FEXPE	-0.2317	-0.2415	-0.2379	-0.4138+	-0.0460
	0.1620	*0.1625*	*0.1613*	*0.2439*	*0.2204*
PUBLIC	-0.0377	-0.0700	-0.0661	0.1148	-0.1764
	0.1306	*0.1290*	*0.1285*	*0.1662*	*0.2207*
OWNTRANS	-0.0016	-0.0015	-0.0016	-0.0006	-0.0039
	0.0020	*0.0020*	*0.0020*	*0.0028*	*0.0028*
lambda_bga	0.2127	0.0335	-0.0955	0.8233	-0.8323
	0.4234	*0.4271*	*0.4180*	*0.7330*	*0.7219*
HITECH		0.6902**	0.7247**	0.8624+	0.5471
		0.2696	*0.2678*	*0.5166*	*0.3356*
MEDTEC		0.4497**	0.5144**	0.2272	0.5752+
		0.1920	*0.1938*	*0.2348*	*0.3045*
LOWTEC		0.5346**	0.6023**	0.2706	0.9213**
		0.2202	*0.2217*	*0.2997*	*0.3299*
KNINTEN		0.0266	0.0997	-0.1237	0.1887
		0.2010	*0.2039*	*0.2821*	*0.2966*
LEKNIN		0.2473	0.3169	-0.1593	0.6095+
		0.2202	*0.2225*	*0.2705*	*0.3426*
Year control	Included	Included	Included	Included	Included

Constant	0.0835	-0.8262	-0.8471	-1.7659	-1.2906
	0.6902	*0.8008*	*0.7913*	*1.4426*	*1.1227*
Observations	776	776	776	413	363
Wald chi2	76.79	92.85	96.91	38.89	79.44
Prob>chi2	0.0000	0.0000	0.0000	0.0378	0.0000
R-squared	0.0643	0.0802	0.0921	0.0365	0.1998
DWH test					
Robust score	25.1705	24.7318	23.3164	11.3396	15.1709
chi2	(p=0.0000)	(p=0.0000)	(p=0.0000)	(p=0.0008)	(p=0.0001)
Robust	25.9097	25.3811	23.8342	11.539	14.0118
regression F	(p=0.0000)	(p=0.0000)	(p=0.0000)	(p=0.0008)	(p=0.0002)
Test of overidentifying restriction:					
Hansens J chi2	1.48344	1.12461	1.21128	1.72191	0.196803
	(p=0.2232)	(p=0.2889)	(p=0.2711)	(p=0.1894)	(p=0.6573)
Mean vif	2.59	2.59	2.61	2.6	2.6

Notes: GMM weight matrix: robust; Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.001

Table A2.4.2.5 Marginal effects-NLB assets seeking FDI 5

	Model 1-co-m	Model 2-co-m	Model 3-co-m	Model 4-co-m	Model 5-co-m
	Full sample	Full sample	Full sample	SOEs	POEs
1.BGA	0.1069**	0.1281***	0.0275	0.1183*	0.1500**
	0.0354	*0.0323*	*0.0529*	*0.0557*	*0.0491*
1.BG_FIN			-0.0031		
			0.0369		
1.BG_RD			0.1457***		
			0.0375		
	Model 11-co-m	Model 12-co-m	Model 13-co-m	Model 14-co-m	Model 15-co-m
	Full sample	Full sample	Full sample	SOEs	POEs
1.BGA	0.4203*	0.5450**	0.1110	0.7916	0.5155**
	0.1678	*0.1721*	*0.2225*	*0.4877*	*0.1977*
1.BG_FIN			0.0793		
			0.1516		
1.BG_RD			0.5444**		
			0.1785		

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

Table A2.4.3.1: Probit model-LB assets seeking FDI 6

Variable	Model 21-c	Model 22-c	Model 23-c	Model 24-c	Model 25-c
	Full sample	Full sample	Full sample	SOE sample	POE sample
DEVOPED	0.7862***	0.8017***	0.7864***	0.5400**	1.1566***
	0.1399	*0.1461*	*0.1482*	*0.2051*	*0.2146*
BGA	0.1096	0.1142	-0.1316	-0.4562	0.1944
	0.1618	*0.1653*	*0.2163*	*0.4763*	*0.1969*
BG_FIN			0.0266		
			0.1536		
BG_RD			0.3343*		
			0.1659		
STATE	-0.3830**	-0.3642**	-0.4115**		
	0.1319	*0.1320*	*0.1379*		
LAGE	-0.0637	-0.1205	-0.1499	-0.1901	-0.0833
	0.1055	*0.1047*	*0.1067*	*0.1559*	*0.1608*
PROFIT	0.0022	0.0023	0.0019	-0.0042	0.0077*
	0.0020	*0.0021*	*0.0022*	*0.0036*	*0.0030*
LTASSET	-0.0194	0.0151	0.0223	0.0585	-0.0362
	0.0366	*0.0381*	*0.0391*	*0.0481*	*0.0821*
LANPAT	0.0214	0.0146	0.0131	-0.0282	0.0633
	0.0214	*0.0253*	*0.0255*	*0.0361*	*0.0421*
LANTRADM	0.1467*	0.1608*	0.1436*	0.1688	0.1727+
	0.0608	*0.0658*	*0.0664*	*0.1115*	*0.0897*
FEXPE	0.0358	0.0063	0.0053	-0.1256	0.0610
	0.1346	*0.1359*	*0.1367*	*0.2030*	*0.2011*
PUBLIC	-0.1546	-0.2259+	-0.2174+	-0.1497	-0.1296
	0.1231	*0.1242*	*0.1263*	*0.1676*	*0.2025*
OWNTRANS	-0.0025	-0.0025	-0.0027+	0.0015	-0.0091***
	0.0016	*0.0017*	*0.0017*	*0.0024*	*0.0026*
lambda_bga	-0.0215	-0.0737	-0.1193	0.1142	-0.1986
	0.4485	*0.4499*	*0.4672*	*0.6865*	*0.8783*
HITECH		0.4638*	0.4831*	-0.1040	1.3869**
		0.2296	*0.2333*	*0.3883*	*0.4776*
MEDTEC		0.3388+	0.3762+	0.1657	1.2063**
		0.1887	*0.1941*	*0.2319*	*0.4513*
LOWTEC		0.7358**	0.7938**	0.8441*	1.3513**
		0.2730	*0.2767*	*0.3729*	*0.5131*
KNINTEN		0.0154	0.0730	-0.1211	0.8593+
		0.2222	*0.2250*	*0.2788*	*0.4788*
LEKNIN		0.0558	0.1203	-0.0568	0.8491+
		0.2427	*0.2470*	*0.3192*	*0.4853*
Constant	-0.5942	-1.3151+	-1.3824+	-1.7783	-0.9469
	0.6599	*0.7469*	*0.7633*	*1.1841*	*1.4865*
Year control	Included	Included	Included	Included	Included

Observations	780	780	780	417	363
Wald chi2	77.65	88.79	89.5	39.92	80.66
Prob>chi2	0.0000	0.0000	0.0000	0.0297	0.0000
Pseudo R2	0.1085	0.127	0.132	0.1071	0.2024
Log pseudolikelihood	-381.9862	-374.0608	-371.8929	-176.7923	-177.6011
Mean vif	2.53	2.54	2.57	2.55	2.55

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

Table A2.4.3.2: Negative binomial regression-LB assets seeking FDI 7

Variable	Model 26-c	Model 27-c	Model 28-c	Model 29-c	Model 30-c
	Full sample	Full sample	Full sample	SOE sample	POE sample
DEVOPED	1.9108***	1.9007***	1.9342***	1.5619**	3.2864***
	0.3422	*0.3602*	*0.3552*	*0.5449*	*0.4276*
BGA	0.8102+	0.2652	-0.1262	-1.1490	0.3920
	0.4200	*0.4270*	*0.5245*	*1.0194*	*0.4184*
BG_FIN			0.8269*		
			0.3895		
BG_RD			0.2311		
			0.3891		
STATE	-0.5524	-0.7093*	-0.7617*		
	0.3368	*0.3195*	*0.3236*		
LAGE	0.1294	-0.2352	-0.2829	-0.4410	0.0195
	0.2826	*0.2818*	*0.2864*	*0.4090*	*0.3220*
PROFIT	0.0090	0.0095+	0.0075	-0.0038	0.0117
	0.0059	*0.0056*	*0.0057*	*0.0129*	*0.0092*
LTASSET	0.0268	0.0474	0.0416	0.1678	0.2051
	0.1077	0.1073	0.1091	0.1339	0.1722
LANPAT	0.1405*	0.1230*	0.1367*	-0.0736	0.3661***
	0.0590	*0.0616*	*0.0621*	*0.0845*	*0.0794*
LANTRADM	0.0562	0.2512	0.1702	0.8409***	-0.3357+
	0.1618	*0.1686*	*0.1713*	*0.2106*	*0.1937*
FEXPE	-0.3558	-0.1718	-0.3249	-1.1423*	-0.2210
	0.3312	*0.3273*	*0.3204*	*0.4641*	*0.4059*
PUBLIC	-0.0531	-0.5780+	-0.6732*	-0.2649	-0.8686+
	0.3004	*0.2958*	*0.3025*	*0.4542*	*0.4769*
OWNTRANS	-0.0015	-0.0044	-0.0044	0.0046	-0.0155**
	0.0041	*0.0039*	*0.0040*	*0.0057*	*0.0050*
lambda_bga	1.5029	1.8265	1.1038	1.9213	-1.5394
	1.2345	*1.2078*	*1.2310*	*1.7586*	*1.7995*
HITECH		-0.4590	-0.3318	-2.3488*	3.4783**
		0.5845	*0.5851*	*0.9676*	*1.0156*
MEDTEC		0.0966	0.2739	-0.4065	2.8943**
		0.5780	*0.5901*	*0.8338*	*0.9518*
LOWTEC		1.6683*	1.9586**	1.2321	5.1832***
		0.6997	*0.7194*	*1.0414*	*1.1184*
KNINTEN		-0.5155	-0.3916	-1.2653+	2.4149*
		0.5749	*0.5772*	*0.7452*	*0.9981*
LEKNIN		-1.3063*	-1.1927+	-2.9151***	3.7256**
		0.6039	*0.6128*	*0.8169*	*1.0862*
Constant	-3.6650+	-2.6111	-2.1607	-4.6125	-4.7061
	2.0044	*2.0131*	*2.0362*	*3.3170*	*2.4937*

Year control	Included	Included	Included	Included	Included
Observations	780	780	780	417	363
Wald chi2	152.14	180.53	189.87	149.2	178.67
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.0365	0.0435	0.0447	0.0482	0.0861
Log pseudolikelihood	-1077.9096	-1070.0524	-1068.7398	-472.6961	-561.4342
LR test of alpha=0					
Prob>=chibar2	0.0000	0.0000	0.0000	0.0000	0.0000
Mean vif	2.53	2.54	2.57	2.11	3.98
Voung test of zinb vs standard negative binomial (inflate _cons)					
z	-1.05	-1.38	-2.5	0.98	-0.9
Pr>z	0.8527	0.9167	0.9938	0.163	0.8161

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

Table A2.4.3.3: Ivprobit regression model-LB assets seeking FDI 8

Models	Model 31-co	Model 32-co	Model 33-co	Model 34-co	Model 35-co
Variables	Full sample	Full sample	Full sample	SOEs	POEs
DEVOPED	1.3758***	1.4426***	1.4302***	1.2023**	1.8607***
	0.2233	*0.2242*	*0.2271*	*0.3734*	*0.2575*
BGA	0.0829	0.0779	-0.1511	-0.3741	0.1221
	0.1550	*0.1609*	*0.2118*	*0.4359*	*0.1926*
BG_FIN			0.1018		
			0.1479		
BG_RD			0.2741		
			0.1669		
STATE	-0.3670**	-0.3375**	-0.3886**		
	0.1280	*0.1283*	*0.1335*		
LAGE	-0.0019	-0.0561	-0.0823	-0.1187	-0.0800
	0.1053	*0.1043*	*0.1059*	*0.1547*	*0.1591*
PROFIT	0.0030	0.0031	0.0027	-0.0010	0.0068*
	0.0021	*0.0021*	*0.0022*	*0.0041*	*0.0029*
LTASSET	-0.0191	0.0202	0.0241	0.0613	0.0010
	0.0373	*0.0388*	*0.0397*	*0.0480*	*0.0805*
LANPAT	0.0082	0.0046	0.0052	-0.0358	0.0571
	0.0215	*0.0248*	*0.0250*	*0.0351*	*0.0406*
LANTRADM	0.1315*	0.1356*	0.1191+	0.1229	0.1334
	0.0601	*0.0642*	*0.0645*	*0.1104*	*0.0860*
FEXPE	-0.0347	-0.0668	-0.0712	-0.1826	0.0123
	0.1331	*0.1334*	*0.1344*	*0.1995*	*0.1923*
PUBLIC	-0.0716	-0.1361	-0.1333	-0.0485	-0.0937
	0.1231	*0.1246*	*0.1261*	*0.1723*	*0.1945*
OWNTRANS	-0.0028+	-0.0027+	-0.0028+	0.0015	-0.0093***
	0.0016	*0.0016*	*0.0016*	*0.0024*	*0.0025*
lambda_bga	-0.0165	-0.0947	-0.1780	0.2531	-0.4920
	0.4443	*0.4488*	*0.4627*	*0.6735*	*0.8518*
HITECH		0.5090*	0.5351*	0.1552	1.3166**
		0.2259	*0.2290*	*0.3817*	*0.4680*
MEDTEC		0.3467+	0.3875*	0.2109	1.1914**
		0.1868	*0.1916*	*0.2249*	*0.4409*
LOWTEC		0.7780**	0.8333**	0.9258*	1.3485**
		0.2735	*0.2765*	*0.3733*	*0.5057*
KNINTEN		0.0426	0.0920	-0.0898	0.8545+
		0.2196	*0.2225*	*0.2789*	*0.4671*
LEKNIN		0.2059	0.2566	0.0695	1.0141*
		0.2425	*0.2457*	*0.3114*	*0.4821*
Year control	Included	Included	Included	Included	Included
Constant	-1.0416	-1.8969*	-1.8975*	-2.6251*	-1.8727

	0.6717	*0.7509*	*0.7623*	*1.1764*	*1.4438*
Observations	776	776	776	413	363
Wald chi2	93.64	112.6	112.57	52.89	112.89
Prob>chi2	0.0000	0.0000	0.0000	0.0009	0.0000
Log pseudolikelihood	-633.6701	-614.39024	-610.85994	-311.74059	-265.07421
Wald test of exogeneity					
chi2	10.14	11.63	11.39	4.48	11
Prob>chi2	0.0015	0.0006	0.0007	0.0342	0.0009
Mean vif	2.59	2.59	2.61	2.6	2.6

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

Table A2.4.3.4: Instrumental variables (GMM) regression-LB asset seeking FDI 9

Models	Model 36-co	Model 37-co	Model 38-co	Model 39-co	Model 40-co
Variables	Full sample	Full sample	Full sample	SOE	POE
DEVOPED	0.8395***	0.8751***	0.8594***	0.8022**	1.0356***
	0.1546	*0.1550*	*0.1585*	*0.2725*	*0.1875*
BGA	0.1299	0.1143	-0.0445	0.0530	0.1229
	0.1165	*0.1197*	*0.1467*	*0.2868*	*0.1488*
BG_FIN			0.1569		
			0.1135		
BG_RD			0.1551		
			0.1133		
STATE	-0.2922*	-0.2756*	-0.3190**		
	0.1176	*0.1154*	*0.1176*		
LAGE	0.0626	0.0201	0.0008	-0.0635	0.0225
	0.0782	*0.0747*	*0.0750*	*0.1001*	*0.1218*
PROFIT	0.0011	0.0009	0.0006	-0.0017	0.0011
	0.0012	*0.0013*	*0.0013*	*0.0025*	*0.0016*
LTASSET	-0.0123	0.0097	0.0110	0.0125	0.0058
	0.0250	*0.0248*	*0.0245*	*0.0297*	*0.0548*
LANPAT	0.0148	0.0203	0.0224	-0.0350	0.0997**
	0.0187	*0.0206*	*0.0209*	*0.0239*	*0.0367*
LANTRADM	0.0980*	0.0829	0.0669	0.2057*	-0.0553
	0.0499	*0.0509*	*0.0509*	*0.0811*	*0.0649*
FEXPE	-0.0783	-0.1055	-0.1066	-0.1417	-0.0597
	0.1000	*0.1000*	*0.1004*	*0.1371*	*0.1515*
PUBLIC	-0.0385	-0.0766	-0.0796	0.0303	-0.0897
	0.0962	*0.0939*	*0.0937*	*0.1218*	*0.1603*
OWNTRANS	-0.0020	-0.0019	-0.0018	-0.0005	-0.0052*
	0.0013	*0.0013*	*0.0013*	*0.0016*	*0.0022*
lambda_bga	0.2437	0.2637	0.1568	0.6265	0.0755
	0.3104	*0.3050*	*0.3016*	*0.4608*	*0.5557*
HITECH		0.3231*	0.3463*	0.0790	0.4684+
		0.1648	*0.1664*	*0.2617*	*0.2707*
MEDTEC		0.1435	0.1811	-0.0209	0.4131+
		0.1215	*0.1249*	*0.1357*	*0.2377*
LOWTEC		0.6926**	0.7261**	0.7336**	0.8026*
		0.2201	*0.2202*	*0.2780*	*0.3208*
KNINTEN		0.0798	0.1129	-0.0210	0.3204
		0.1324	*0.1373*	*0.1709*	*0.2391*
LEKNIN		0.1379	0.1646	-0.1395	0.5062*
		0.1428	*0.1458*	*0.1591*	*0.2587*
Year control	Included	Included	Included	Included	Included
Constant	-0.0300	-0.5394	-0.5021	-0.8872	-0.2295

	0.4446	*0.4974*	*0.4912*	*0.8045*	*0.9224*
Observations	776	776	776	413	363
Wald chi2	71.14	87.45	88.79	45.5	82.64
Prob>chi2	0.0000	0.0000	0.0000	0.0073	0.0000
R-squared	0.0606	0.0751	0.0809	0.0506	0.1576
DWH test					
Robust score chi2	15.7825 (p=0.0001)	16.6154 (p=0.0000)	15.6076 (p=0.0001)	8.1054 (p=0.0044)	9.57814 (p=0.0020)
Robust regression F	16.9935 (p=0.0000)	18.1478 (p=0.0000)	16.8906 (p=0.0000)	8.7598 (p=0.0033)	9.15662 (p=0.0027)
Test of overidentifying restriction:					
Hansens J chi2	2.51337	2.07165	2.22093	1.03344	0.227289
	(p=0.1129)	(p=0.1501)	(p=0.1362)	(p=0.3094)	(p=0.6335)
Mean vif	2.59	2.59	2.61	2.6	2.6

Notes: GMM weight matrix: robust; Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.001

Table A2.4.3.5 Marginal effects-LB assets seeking FDI 10

	Model 21-co-m	Model 22-co-m	Model 23-co-m	Model 24-co-m	Model 25-co-m
	Full sample	Full sample	Full sample	SOEs	POEs
1.BGA	0.0297	0.0302	-0.0362	-0.1256	0.0536
	0.0428	*0.0427*	*0.0607*	*0.1481*	*0.0538*
1.BG_FIN			0.0071		
			0.0412		
1.BG_RD			0.0876*		
			0.0417		
	Model 31-co-m	Model 32-co-m	Model 33-co-m	Model 34-co-m	Model 35-co-m
	Full sample	Full sample	Full sample	SOEs	POEs
1.BGA	0.0829	0.0779	-0.1511	-0.3741	0.1221
	0.1550	*0.1609*	*0.2118*	*0.4359*	*0.1926*
1.BG_FIN			0.1018		
			0.1479		
1.BG_RD			0.2741		
			0.1669		

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.0001

Chapter 4-Tables and figures

Table A4.4.2.1 Ordered probit regression models 1

Variable	**Model 1-co**	**Model 2-co**	**Model 3-co**	**Model 4-co**	**Model 5-co**	**Model 6-co**	**Model 7-co**	**Model 8-co**	**Model 9-co**	**Model 10-co**
	World	World	World	World	Devoped markets	Devoped markets	Devoped markets	Devoping markets	Devoping markets	Devoping markets
Homediv_de~e	0.1040**	0.0895*	0.0868*	0.0817*	0.1233**	0.1323**	0.1145**	0.0037	-0.0202	-0.0159
	0.0347	*0.0364*	*0.0366*	*0.0368*	*0.0429*	*0.0432*	*0.0437*	*0.0757*	*0.0771*	*0.0766*
PRIVATE	-0.2551*	-0.3933**	-1.4561*		-0.5311**	-1.4485*		-0.2495	-5.1838***	
	0.1152	*0.1283*	*0.6168*		*0.1569*	*0.6498*		*0.2712*	*0.6109*	
BGA	-0.1093	-0.1731	-1.6122*	-0.1500	-0.1965	-1.3727*	-0.1552	-0.3031	-5.9784***	-0.2925
	0.1494	*0.1542*	*0.6331*	*0.1550*	*0.1865*	*0.6728*	*0.1873*	*0.3144*	*0.6184*	*0.3175*
BG_FIN			0.0512			-0.1343			0.1192	
			0.1269			*0.1542*			*0.3231*	
BG_RD			0.4509**			0.4106*			0.7322**	
			0.1403			*0.1726*			*0.2804*	
PRIVATE_BG			1.1922+			1.0032			5.1557***	
			0.6296			*0.6705*			*0.6448*	
CENG				0.5532**			0.7709***			0.4183
				0.1602			*0.1995*			*0.3249*
PROG				0.5074*			0.5919*			0.3214
				0.2167			*0.2611*			*0.5280*
CITYG				0.2218			0.3470*			-0.0467

				0.1349			*0.1588*			*0.3421*
LAGE	-0.1718+	-0.1677+	-0.1702+	-0.1564	-0.1351	-0.1410	-0.1335	-0.3246+	-0.3264+	-0.2906
	0.0946	*0.0943*	*0.0953*	*0.0958*	*0.1138*	*0.1150*	*0.1155*	*0.1894*	*0.1959*	*0.1953*
PROFIT	0.0034+	0.0028	0.0026	0.0028	0.0043	0.0044	0.0041	0.0008	0.0012	0.0010
	0.0020	*0.0021*	*0.0021*	*0.0021*	*0.0030*	*0.0030*	*0.0030*	*0.0037*	*0.0039*	*0.0038*
LTASSET	0.0326	-0.0109	-0.0053	-0.0239	0.0064	0.0163	-0.0142	-0.0646	-0.0479	-0.0692
	0.0352	*0.0382*	*0.0382*	*0.0391*	*0.0483*	*0.0478*	*0.0512*	*0.0685*	*0.0697*	*0.0677*
LANPAT	-0.0746***	-0.0289	-0.0388+	-0.0282	-0.0442+	-0.0550*	-0.0410	0.0108	-0.0076	0.0165
	0.0197	*0.0211*	*0.0212*	*0.0219*	*0.0248*	*0.0250*	*0.0261*	*0.0459*	*0.0486*	*0.0460*
LANTRADM	0.0135	-0.0068	-0.0100	0.0057	0.0557	0.0625	0.0723	-0.1700	-0.1836	-0.1782
	0.0581	*0.0590*	*0.0602*	*0.0610*	*0.0710*	*0.0729*	*0.0740*	*0.1411*	*0.1474*	*0.1482*
FEXPE	0.1791	0.2412*	0.2406*	0.2246*	0.2424+	0.2470+	0.2206	0.3763	0.3753	0.3473
	0.1099	*0.1117*	*0.1118*	*0.1123*	*0.1344*	*0.1335*	*0.1358*	*0.2446*	*0.2457*	*0.2523*
PUBLIC	-0.0132	-0.0304	0.0196	0.0004	0.0432	0.0886	0.1013	-0.3720	-0.2862	-0.3774
	0.1044	*0.1077*	*0.1094*	*0.1097*	*0.1308*	*0.1328*	*0.1341*	*0.2437*	*0.2475*	*0.2500*
OWNTRANS	-0.0041**	-0.0035*	-0.0038*	-0.0034*	-0.0031+	-0.0035+	-0.0030	-0.0067*	-0.0064+	-0.0066+
	0.0014	*0.0015*	*0.0015*	*0.0015*	*0.0018*	*0.0018*	*0.0018*	*0.0033*	*0.0034*	*0.0034*
lambda_bga	-0.2767	-0.2781	-0.3556	-0.2954	-0.2731	-0.2836	-0.3087	0.2044	0.2898	0.1574
	0.3342	*0.3428*	*0.3584*	*0.3434*	*0.4320*	*0.4538*	*0.4337*	*0.6661*	*0.6806*	*0.6726*
Agriculture		0.9893+	1.0404+	0.9333+	1.0796	1.0370	1.0264	1.7167*	1.8833*	1.6419+
		0.5425	*0.5466*	*0.5384*	*0.7037*	*0.7165*	*0.7072*	*0.8722*	*0.8544*	*0.8522*
Construction		0.8520	1.0754	0.8194	0.4368	0.4921	0.2638	4.3941***	4.9131***	4.8325***
		0.8007	*0.7373*	*0.8125*	*0.9463*	*0.8839*	*0.9919*	*0.6210*	*0.6477*	*0.7263*
Finance		0.9785***	0.9719***	0.9868***	0.8015*	0.7917*	0.7674*	1.3462**	1.3113**	1.4056**
		0.2458	*0.2446*	*0.2483*	*0.3133*	*0.3140*	*0.3193*	*0.4264*	*0.4413*	*0.4194*
Manufactur~g		-0.0406	-0.1441	-0.0319	-0.3643	-0.4895+	-0.3953	0.6223	0.4875	0.6542

		0.2196	*0.2257*	*0.2193*	*0.2702*	*0.2854*	*0.2734*	*0.4111*	*0.4276*	*0.4027*
Mining		-0.5747*	-0.5621*	-0.5971*	-0.7394*	-0.7193*	-0.8070**	-0.6625	-0.7354	-0.6459
		0.2432	*0.2461*	*0.2428*	*0.3007*	*0.3092*	*0.3029*	*0.4986*	*0.4990*	*0.5105*
PublicAdm		0.6520	0.6701	0.7148	0.0972	-0.0410	0.0045	4.8910***	5.3522***	5.2754***
		0.6545	*0.6864*	*0.6635*	*0.9025*	*0.9300*	*0.9020*	*0.5136*	*0.5890*	*0.6373*
WholesaleT~e		0.9938**	0.9637**	0.9786**	0.9109*	0.8715+	0.8394+	0.9725	0.7962	1.0464
		0.3552	*0.3607*	*0.3549*	*0.4449*	*0.4555*	*0.4549*	*0.6952*	*0.6922*	*0.6543*
Service		-0.6291*	-0.6925*	-0.6221*	-1.1665**	-1.2478**	-1.2179***	0.2098	-0.0708	0.3233
		0.2897	*0.2953*	*0.2909*	*0.3454*	*0.3597*	*0.3492*	*0.5549*	*0.5838*	*0.5678*
RetailT		0.9309*	0.9302*	0.8980*	0.3199	0.2604	0.2035	1.9827**	1.9524*	2.0358**
		0.4383	*0.4511*	*0.4411*	*0.5877*	*0.6004*	*0.5973*	*0.7208*	*0.7683*	*0.7157*
cut1_cons	-0.7816	-1.8025	-2.7968	-1.5615	-1.2420	-2.0354	-1.0313	-3.5427	-8.0713	-3.2313
	0.6641	*0.7694*	*0.9649*	*0.7487*	*0.9437*	*1.1169*	*0.9341*	*1.5917*	*1.6579*	*1.5447*
cut2_cons	-0.4864	-1.4726	-2.4629	-1.2315	-0.8052	-1.5942	-0.5932	-3.4703	-7.9967	-3.1587
	0.6662	*0.7686*	*0.9637*	*0.7481*	*0.9420*	*1.1146*	*0.9329*	*1.5898*	*1.6555*	*1.5423*
cut3_cons	-0.2322	-1.1765	-2.1611	-0.9335	-0.4917	-1.2746	-0.2771	-3.1605	-7.6737	-2.8471
	0.6676	*0.7704*	*0.9639*	*0.7495*	*0.9451*	*1.1158*	*0.9354*	*1.5849*	*1.6504*	*1.5386*
Year control	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Observations	723	723	723	723	529	529	529	194	194	194
Wald chi2	62.05	185.92	211.39	187.21	154.75	188.95	152.6	1348.98	1350.24	1210.55
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.0391	0.1123	0.1206	0.1152	0.1342	0.141	0.1385	0.1576	0.178	0.1609
Log pseudolikelihood	-829.6262	-766.4263	-759.3338	-764.0039	-565.9468	-561.4908	-563.1183	-162.2105	-158.2706	-161.5718
Mean vif	2.51	2.46	4.1	2.44	2.78	4.1	2.44	2.46	4.1	2.44

Notes: Robust standard error (italic); coefficient (underline); +p<0.10, *p<0.05, **p<0.01, ***p<0.001

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